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This study attempted to isolate factors that inhibit and facilitate the implementation phase of the process of planned organizational change. The study was made of an innovation--the radical redefinition of the role of the teacher--which was introduced into a small elementary school in a lower class urban area. Data collection procedures included nonparticipant observation, informal discussions, formal interviewing, systematic observations of classroom, and self-administered questionnaires. The implementation failed. The report concludes that the extension of theory with respect to the implementation of proposed organizational changes must take into account: (1) Staff resistance as a potential obstacle, (2) the clarity of an innovation, (3) members' capability to perform it, (4) the existence of necessary materials and resources, and (5) the compatibility of organizational conditions with the innovation. In addition, resistance to change may emerge after the introduction of an innovation and can vary over the period of time during which implementation efforts are made. Included are a review of the literature and a bibliography. (MF)

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Report Number 5

AN ATTEMPT TO IMPLEMENT A MAJOR EDUCATIONAL INNOVATION: A SOCIOLOGICAL INQUIRY

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Harvard University
Cambridge, Massachusetts

1968

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PREFACE

This is a study of the fate of a promising educational innovation that was introduced into an elementary school. Its primary objective was to isolate factors that inhibit and facilitate the implementation phase of the process of planned organizational change, a problem that has received little systematic attention in the social science and educational literature. We hoped to shed light on issues of central importance to both students of organizational change and individuals concerned with the practical problems of introducing and incorporating change into educational organizations.

The inquiry consisted of an intensive case study that required eight months of field work and related data collection activities. It would not have been possible to conduct our inquiry without the cooperation of many individuals. First, we wish to acknowledge our indebtedness to the entire staff of the school, the Director's staff, and the Superintendent's Office whose cooperation was crucial to the successful completion of our work. We are especially grateful to its Director for his invitation to study the change process taking place in the school and for his excellent cooperation, including permission to remain at the school as long as we felt was necessary to obtain the kinds of data we believed were needed to carry out an intensive case study.

We have benefited greatly from conversations with many of our colleagues at Harvard University and elsewhere about the problem area examined in this inquiry. We found of special value the observations of Robert H. Anderson, Louis B. Barnes, Robert Dreeben, and Elmer Van Egmond.

We also wish to express our appreciation to James A. Stinchcomb and Ralph G. Lewis who provided valuable assistance in the phase of our study that focused on the review of literature.

Theresa Kovich served as the secretary of the Project. We are indebted to her for her many contributions to the completion of the study in addition to assuming the typing of most of the final manuscript. We are also grateful to Marion L. Crowley who provided us with timely and extremely important assistance in many ways.

We also wish to express our appreciation to the Harvard Graduate School of Education and its Center for Research and Development on Educational Differences for providing the necessary financial resources to initiate and carry out the inquiry.

Finally, for their everlasting patience and fortitude our spouses Pan, Melanie, and Norman deserve special thanks.

Despite the help and advice received from others, we alone, of course, are responsible for the contents of this monograph and for whatever shortcomings it may contain.

Neal Gross

Joseph B. Giacquinta

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Chapter 1

INTRODUCTION TO THE STUDY

The President of Educational Testing Service, Henry Chauncey, (1967, p. 9), has noted a salient characteristic of American education in the nineteen sixties: "When one talks or writes about education these days, the temptation to use such phrases as innovation, educational ferment, technological revolution, or explosive growth is irresistable. One cannot avoid them, for explosive and revolutionary changes are occurring in education." This current climate of change has been attributed to a number of factors: criticisms of "progressive" education that arose after World War II, the efforts of schools to meet the demands of a rapidly changing society, "Sputnik," the knowledge "explosion," new theoretical insights into the learning process, and most recently, the Civil Rights Movement and federal aid to education (Atkin, 1966; Cronbach, 1966; Hand, 1965; Jennings, 1967).

Big-city school systems in recent years have attempted to find better ways of educating youth, and especially, to improve the academic performance of students of the ghetto. Gordon and Wilkerson (1966) reviewed over 300 compensatory education programs adopted by school systems since 1960 in efforts designed to remedy the educational deficiencies of the lower class urban child. In addition, many other types of innovations have been proposed or adopted in the public schools. Fallon (1966) described what he calls "628 Best School Practices Adopted by 323 Good School Systems Between 1957-64 Across the United States"; Stufflebeam (1966) examined 150 innovations adopted by a sample of school systems in the State of Ohio during 1965; Brickell (1961) reported on a large variety of educational innovations in New York State.

Most educational innovations need to be implemented at the school level. For example, both New York's More Effective Schools Program and Detroit's Great Cities Project propose team-teaching and nongrading in schools. The aims of team-teaching include flexibility in classroom size, scheduling, and teacher specialization, while nongrading stresses the importance of giving individual attention to the needs of children and their learning rates. Both innovations require major changes in schools if they are to be implemented, for example, changes in the role of the teacher and the principal and the traditional authority structure of the school (Goodlad and Anderson, 1963; Shaplin, 1965).

The implementation of organizational innovations is an important phenomenon for study for several reasons. First, no matter how promising an organizational innovation appears on paper, or how well demonstrated its positive effects are in another organization where it has been implemented, it still must be put into operation in the adopting organization in order to determine its effectiveness. Second, until an organizational innovation is implemented, one has no basis to judge whether its anticipated effects do occur.

Furthermore, the assumption is frequently made that an adopted innovation is being properly implemented when outcomes are measured. If no effect is found, its ineffectiveness is typically ascribed either to inadequacies in the innovation itself or to its premature evaluation. Yet, it is quite possible that the innovation is having little, if any, effect for another reason: its actual implementation has been minimal.

Consider the findings that have emerged from the evaluation of compensatory education programs. Their assessments have generally revealed ambiguous or slight effects on upgrading the academic performance of lower class urban students, in spite of the huge sums of money and the energy that have been devoted to these efforts. Gordon and Wilkerson's (1966, p. 156) review of these programs documents the disappointing findings, as does the Civil Rights Commission's (1967, p. 138) assessment of a limited number of compensatory programs.* Both focus on possible deficiencies of the programs to explain lack of positive effects. Gordon and Wilkerson conclude:

> It is not at all clear that the concept of compensatory education is the one which will most appropriately meet the problems of the disadvantaged. . . What kind of educational experience is most appropriate to what these children are and to what our society is becoming? Once this question has been posed, it brings into focus the really crucial issue, that is, the matter of whom we are trying to change. We have tended until now to concentrate our efforts on the children. (pp. 158-159)

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*The Banneker Project in St. Louis, Higher Horizons Program in New York, All Day Neighborhood School Program, Madison Area Project in Syracuse, Berkeley School System Project, Philadelphia's Education Improvement Program, and preschool programs generally.

The Civil Rights Commission surmises:

> One possible explanation is that compensatory programs do not wholly compensate for the depressing effect which racial and social class isolation have upon the aspirations and self-esteem of Negro students. . . . the compensatory programs reviewed here appear to suffer from the defect inherent in attempting to solve problems stemming in part from racial and social class isolation in schools which themselves are isolated by race and social class. . . . the evidence reviewed here strongly suggests that compensatory programs are not likely to succeed (have the desired effects) in racially and socially isolated school environments. (pp. 138-140)

Yet, an examination of both reports indicates that neither considered the possibility that inadequate implementation of the programs might account for their ineffectiveness. Our review of several other evaluations* of major educational innovations revealed that little or no consideration was given to the degree of their actual implementation.

It is our contention that in places where promising organizational innovations have had little effect, one possible explanation for this circumstance is that the degree of actual implementation may have been minimal. Hymen, Wright, and Hopkins (1962) note this possibility in an important methodological study of the "effects" of encampment programs on subsequent citizenship behavior and attitudes of the attending students:

> The answer to why a program was ineffective may even reduce to the simple fact that it was not in reality operative; it existed only on paper. . . Subtle exploration of the social

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*Higher Horizons Program (Wrightstone et al., 1964); Special Enrichment Program of Quality Integrated Education for Schools in Transitional Areas (Kravetz, 1967); Prevention of School Problems Program (Liddle et al., 1967).

> and psychological dynamics that led to its being ineffective on subjects would be the height of pedantry. When the stimulus is not there, there is no process that it can generate. . . . (pp. 74-75)

In short, potentially excellent innovations will appear worthless when desired effects are not found if there is a minimal degree of actual implementation; only a careful assessment of the degree to which they have been implemented can reveal whether this is in fact the case.*

We have maintained that the degree of actual implementation of an innovation needs to be taken into account in the consideration of why anticipated effects are not obtained after it has been introduced into an organization. If it is true that certain organizational innovations do not have much effect because they are inadequately implemented, then it is also important to understand why this occurs. There is a paucity of knowledge about factors that block or facilitate the implementation of new programs or practices in organizations. Such information is needed by educational practitioners in their efforts to achieve positive educational outcomes through organizational innovations. It also bears on problems of central interest to social scientists concerned with understanding the dynamics of planned organizational change.

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*It also deserves to be noted that if positive effects are found, it is not possible to determine what is causing the effect without assessing what was put into operation. Something quite different from the proposed change might have been implemented and had the effect. Or, only one aspect of what is being implemented might be responsible for causing the positive effect. Or, all the implemented aspects might be necessary (Hymen et al., pp. 74-75, 167).

A number of social scientists and educators (Bennis, 1966; Guba, 1966; Heathers, 1965; and Stufflebeam, 1966) have indicated how limited our knowledge and understanding is of what accounts for differences among organizations in their success in implementing organizational innovations. The Director of The National Institute for the Study of Educational Change has commented that "Several factors exist which militate against success for any venture in planned educational improvement. Undoubtedly the chief among these is the rampant conceptual poverty about the change process in general" (Guba, 1966). More specifically, Bennis (1966) has argued, "What we know least about -- and what continually vexes those of us who are vitally concerned with the effective utilization of knowledge -- is implementation. As I use the term, 'implementation' encompasses a process which includes the creation in a client-system of understanding of, and commitment to, a particular change which can solve problems and devices whereby it can become integral to the client-system's operation" (p. 175).

In view of our meager knowledge about this problem an intensive case study of an effort to implement an organizational innovation appeared to be a strategic method for exploring it. We felt that existing formulations of the problem were too simplistic and ignored the organizational complexities involved. We therefore undertook a detailed study of an effort to implement a major organizational innovation, a new role model for teachers, which had been introduced into a small elementary school; through studying what transpired during a six-month period after it was announced we hoped to shed light on these organizational complexities and the dynamics of the process of change. We also hoped that the investigation would be suggestive for developing a theoretical formulation to account for the success or failure of organizations in implementing innovations. In conducting this case study we, therefore, focused on the following questions: (1) To what extent was the innovation implemented? (2) What factors accounted for the degree of implementation that occurred? (3) To what conditions could these factors be attributed?

The Innovation Involved in this Study of Implementation

The educational innovation we shall examine was a new role model for teachers and we shall call it the Catalytic Role Model. The innovator who introduced it conceived of the innovation as a way of dealing with the poor academic achievement of lower class children taught by teachers who conformed to "the traditional" role model. Before describing the innovation, it is relevant to consider the objectives it was designed to achieve.

During a private talk the innovator disclosed his conception of the aims of this organizational innovation:

> . . .basically we wanted to create a place that. . . any sensible, red-blooded American kid would want to go to, maybe even if we were terribly successful, a place that would be difficult for them to stay away from. . . mainly most of our kids are sort of normal kids who would rather be anywhere but school; so the first thing that we wanted to do is create a kind of atmosphere, a kind of free and

> easy approach where the teachers weren't lording it over the kids all the time and telling them what to do; we then wanted to create an environment or an atmosphere where kids could make choices, where they had choices to make and where they made them, where they were able to make them and were able to make relatively sensible interesting choices and do something with them; after that, we wanted to get across to the kids that it was legitimate to use their minds and not only legitimate but that partly it was fun, it would be fun and that there was satisfaction, intrinsic satisfaction, in using your mind. . . one of the things that we've said is that we don't give a damn about achievement tests, that's not what we're after. . . we say school isn't reading scores. . . we've told teachers, if you want to prepare children for Classical High School, don't come here to teach. . . .

The major objectives were more formally spelled out in the innovator's January Document (Appendix B-3, pp. 336-345) as follows: (1) to allow children to discover the intrinsic satisfaction and delight coming from successful employment of their own intellectual and aesthetic energies at whatever level those energies are or can become capable of operating, (2) to encourage children to become increasingly self-motivated and increasingly responsible for their own learning and education -- to make their education as self-directed as possible, (3) to ensure that children emerge from school convinced that they are, to some large extent, able to cope with the world, that they possess the necessary intellectual and aesthetic skills, and are therefore competent to manage themselves and their lives in such a fashion that they might have some positive effect on that world if they so choose, (4) to help children acquire the following mental skills or operational competencies: observation, comparison, classification and categorization, perception of problems, intuition and hunching, hypothesis building and testing, extrapolation, interpretation, building of models, and appreciation, (5) to make the job of teaching more productive, (6) to make schools instruments that better reflect and better serve their community.

In order to achieve these ends the innovator proposed that the role of the teacher be redefined. A comparison of the old definition of the teacher's role that prevailed in November, 1966 with that of the new one will pinpoint the salient characteristics of the organizational innovation.

Traditionally, an elementary school has been the place where children are offered a specific body of information and a number of skills. Children are seen as bottles to be filled depending on capacity, and given this basic conception, the primary task of the teacher is to fill these bottles. The teacher is expected to "impart" or "cover" a specified body of information and to "drill" children so that they can learn skills such as reading and writing. The teacher is expected to direct the children's energies so that they will learn a standard set of subjects, usually in concert with all or sections of their class and usually in "chunks" of time during the day. The teacher, therefore, is expected to limit interaction among students and to assign materials to be read or work to be done designed to achieve curricular objectives of the schools. The teacher is expected to be a director of pupil learning. She takes the initiative in teacher-pupil interactions and their communications are primarily in the form of questions and answers. Teachers are expected to assess, reward, and punish children on the basis of how thoroughly they have covered the curriculum content and how correctly they have "learned" it. In short, this role definition for the teacher is one that stresses her function as the director of the child's achievement of academic standards put forth by the school or the larger system.

The new definition of the teacher's role, which was conceptualized and announced by the innovator, viewed the teacher as assisting children to learn according to their interests throughout the day in self-contained classrooms.* She was expected to emphasize the process, not the content, of learning. She was expected to allow the student maximum freedom in choosing his own activities.

This role definition was based on the assumption that the basic purpose of the "new school" is to see to it that the potential talents and interests of each child are maximized, to help children to develop their interests and capacities, to help them learn how to learn, and not to teach them a set of standard concepts or knowledge. Children are seen as different types of candles to be lit and the task of the teacher is to light each candle. Given this conception of schooling and children, the teacher's task in the "new school" is seen as creating an atmosphere in the classroom during the entire school day in which children can pursue their own interests to learn what they, not the teacher, view as important. To do this, the teacher is expected to see to it that the classroom is flooded with a variety of educational materials, primarily self-instructional, which are built around or concern themselves with "pedagogically sound" educational ideas so that whatever materials a child decides to work with they will make a substantial and necessary contribution to his education. In this rich environment which would be arranged according to basic areas (see Appendix B-2, p. 317 for schematic of room arrangement) she is expected to encourage children to pursue their own interests. The teacher is expected to act as a facilitator of contacts between children and materials (which are designed as much as possible to be self-instructional) and among children and is expected to encourage children to teach each other. Within the limits imposed by availability of materials and the necessity to cope with problems of "disruptive" children, the teacher is supposed to allow students to decide which materials they wish to work with, how long they will work with them, and with whom they wish to relate. Teachers are not expected to keep pupils at their desks in order to listen to or carry out her directives. The teachers are expected to allow children to select the part of the room in which they wish to work and to choose from among a wide variety of materials -- e.g., a gerbil, a balance game, mystery powders, an Eskimo film cartridge, a math game, an electric typewriter, an ant colony, or a set of interesting and relevant books, and to explore their own interests. The teacher does not impart a set body of knowledge and skills to all of the class simultaneously, but she is expected to see to it that interaction between children and materials and among children is productive. The pupil is given primary responsibility for directing his own education, and the teacher is expected to assist him when she perceives that her help is needed. In short, the new role model for a teacher is one that stresses her primary function as a catalyst or guide. The innovator does note, however, that at times it may be necessary for a teacher to apply subtle coercion to get some children who have not spent enough time on skills, such as reading, to do so. It is assumed, however, that children will need such skills as reading in order to pursue their interests, and therefore, such skills will be learned in the normal course of the child's efforts to fulfill his interests and basic curiosity to learn. In Chapter Five we shall present the dimensions of the performance of teachers that we viewed as indices of their conformity to this role definition when we examined the degree of implementation of the innovation in May.

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*The notions that children should be allowed to move freely from classroom to classroom and work outside and in the hallways were not built into the innovation. Moreover, although this new role has implications for other systemic properties such as "authority structure," none were clearly specified by the innovator as part of the innovation; therefore, they were not considered as part of the proposed organizational change and omitted as sources of criteria for assessing the degree of implementation found in May, 1967.

According to the innovator, the basic assumptions underlying the innovation may be specified as follows: (1) "American society now requires its schools to assist children to become independent, responsible, thinking adults," (2) "human beings can no longer, in the middle of the 20th Century, comprehend in any meaningful fashion more than a small fraction of the immense body of knowledge and the intellectual and technical skills available," (3) "human beings can no longer construct a series of 'correct' answers or interpretations of observed facts to which all thinking people can agree," (4) "it is not how much we know that is important but what we are able to do with what we know," (5) "human beings tend to 'learn' best those things which they feel to be relevant to their lives and interests, and which they feel they themselves have in some measure chosen to learn," (6) "it is possible as well as desirable to devise an educational process that will encourage children to become increasingly responsible for their own learning," (7) "the profession of the teacher -- as it is presently conceived and practiced -- is neither a sensible nor a possible one to expect large numbers of people to practice successfully," (8) "the institution called 'school' as we know it today is rightly and of necessity undergoing vast changes not only in the instructional process that occurs inside its walls but in its relationship to the world outside those walls -- to parents, the local community, to other civic and social agencies and forces, and to the community at large" (January Document, Appendix B-3, pp. 319-335).

Some innovations in organizations specify slight or moderate alterations in the role expectations of their members. In this case, the innovation consisted of a radical redefinition of the role of the teacher and a fundamental change in her primary functions. For this reason we choose to call it a "major" organizational innovation.* Whether the kinds or number of problems that arise in implementing this kind of innovation occur when changes of a lesser magnitude are instituted is problematic.

Before turning to the review of literature, it is relevant to consider several concepts that we shall employ in our investigation.

Definition of Concepts

Formal Organizations

We conceive of formal organizations as rationally contrived and deliberately designed social arrangements that organize individuals in a formalized authority structure and division of labor that link members to one another as occupants of interrelated positions in order to facilitate the achievement of goals. We use the concept, "role," to refer to a set of expectations or standards applied to the behavior of incumbents of positions (Gross *et al.*, 1958, p. 60).

We view organizational change as *behavioral* changes with reference to deliberately designed roles, the authority structure, the division of labor, or the goals of an organization. Katz and Kahn (1966) have a similar conception of organizational change. "The major error in dealing with problems of organizational change both at the practical and theoretical level, is to disregard the systemic properties of the organization and to confuse individual change with modifications in organizational variables, behavior related to such things as role relationships. . . . The confusion between individual and organizational change is due in part to the lack of precise terminology for distinguishing between behavior determined largely by structured roles within a system and behavior determined more directly by personality needs and values. The behavior of people in organizations is still the behavior of individuals, but it has a different set of determinants. . . . Scientists and practitioners have assumed too often that an individual change will produce a corresponding organizational change. This assumption seems to us indefensible. . ." (pp. 390-391, 450-451). In short, changes in organizations, as we shall use the term, refers to changing _organizational behavior_ of members.

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* For an excellent study that focused on the implementation of a new nurse's role on a mental hospital ward, see Schwartz, 1957.

Organizational Innovation

The term "organizational innovation" shall be used to refer to any proposed idea or set of ideas about how the _organizational behavior_ of members should be changed in order to resolve problems of the organization and/or to improve its performance. We shall use it to refer to a proposed change in a single organization so that just as long as the proposed change is new to the particular organization under scrutiny it will be called an innovation. The terms "proposed organizational change" and "organizational innovation" will be used interchangeably. In this investigation, the "catalytic role model" is a set of ideas about what teacher behavior should be or how her classroom performance should change in order to improve the "schooling" of children. As noted earlier this is being called a major organizational change because it proposes to alter drastically the definition of the teacher's role in the school.

Degree of Actual Implementation

The term, "degree of actual implementation," will be used to refer to the extent to which, at a given point in time, the organizational behavior of members conforms to the organizational innovation. Put another way, degree of actual implementation refers to the extent to which organizational members have changed their behavior so that it is congruent with the behavior patterns required by the innovation. In this investigation, the operational definition of implementation of the organizational innovation will be defined as the extent to which teacher role performance at the end of a six-month period of attempted implementation conformed to the specifications of the catalytic role model for their behavior. These specifications are presented in Chapter Five.

Planned Organizational Change

Two different uses of the term "planned organizational change" are found in the planned organizational change literature. Some writers use the term to refer to deliberate efforts to instigate a process of change in an organization without reference to any specific innovation. The emphasis is on "getting change going," that is, identifying organizational problems and setting in motion forces to cope with them. Others view "planned organizational change" as deliberate efforts to introduce changes into the organization, that is, modifying specific patterns of organizational behavior; in this case the change has reference to concrete organizational innovations. We shall use the term, planned organizational change, to refer to the total process that may occur in efforts to deliberately alter organizational behavior through the introduction of innovations. We distinguish three basic stages or time periods in this process: (1) the period of the initiation of organizational innovations, (2) the period of the implementation of organizational innovations, (3) the period during which innovations are incorporated into the organization. A somewhat similar way of viewing these three stages are Lewin's (1958, pp. 197-211) notions of unfreezing, changing, and refreezing. Additional stages of the process that may deserve consideration are that period of time antecedent to the central process which may have an impact on it and the period subsequent to the process during which the effects of the innovation are occurring.

The period of time antecedent to the introduction of an organizational innovation, focuses attention on conditions prevailing in an organization prior to the actual initiation of change. Initiation refers to that period of time in which a particular innovation is selected and introduced into an organization. More specifically, it is the stage in which an organization defines a problem, decides on an innovation to resolve it, and presents the innovation to organizational members. The period of Implementation begins after the announcement that an innovation will be adopted and focuses on efforts to make the changes in the behavior of organizational members specified by the innovation. If during this period the implementers of the innovation do not make the efforts to appropriately change their behavior the process breaks down. Incorporation is the period when a change that is implemented becomes an enduring part of the operation of the organization. In the literature, this stage in the process is usually not separated for examination from implementation.* Lewin's notion of "refreezing" approximates the meaning of this stage. The Effects stage refers to the period during which the effects of the implementation of the innovation for organizational functioning are occurring. This stage may arise before or after the period of incorporation and in any empirical case, of course, may not emerge at all.

Overview of the Chapters

In Chapter Two we present the major conclusions that emerged from our review of the literature on planned organizational change, the evidence on which they were based, and their implications for our study.

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* One study which did make this distinction is by Miner (1960) and deals with the maintenance of superstitious practices within an African tribe in spite of the implementation of an innovation contrary to them.

In Chapter Three the major methodological problems encountered in the investigation and the procedures employed to secure data for the examination of the basic questions of the study are discussed.

In Chapter Four we examine the extent to which conditions antecedent to the planned change effort, which some students of planned change have argued have an important bearing on the degree to which an innovation is successfully implemented, existed at the school. The chapter presents evidence about antecedent conditions external and internal to the school just prior to the announcement of the major organizational change by the innovator in November, 1966.

In Chapter Five we present our assessment of the degree of actual implementation of the innovation in May, 1967. We also discuss the rationale underlying the evaluation and the assessment procedures that were employed.

In Chapter Six we present evidence that sheds light on the factors that account for the degree of implementation of the innovation that prevailed in May, 1967, at the time of our assessment, and at points earlier in time, beginning with its announcement in November, 1966.

In Chapter Seven, we attempt to isolate the conditions prevailing during the period between announcement and assessemnt that could account for the existence of these factors. In Chapter Eight we consider the theoretical and practical implications of the findings that emerged from our study.

Chapter 2

THE LITERATURE ON PLANNED ORGANIZATIONAL CHANGE: A CRITICAL APPRAISAL

To place our study in proper prospective it is necessary to examine the literature on planned organizational change with special attention to implementation of organizational innovations. This chapter presents the major conclusions of our review of this literature, the evidence upon which they are based and their implications for our inquiry.

Some people have attempted to apply a model arising from studies of the adoption and diffusion of innovations among aggregates or collectivities of people such as farmers, doctors, and housewives to the introduction of organizational innovations in school settings. We will first discuss, and indicate our reservations about, the work done in this tradition. Then, in much more detail we shall present our critical appraisal of planned organizational change studies and speculative papers* that focus on the antecedents, initiation and implementation of organizational innovations with special reference to their usefulness in understanding why schools vary in their success in carrying out organizational innovations.

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* In contrast to the study of planned change, that is change resulting from conscious, deliberate efforts to improve the operations of a system, there is also the study of change which results from human interaction directed toward ends other than the change under scrutiny, -- i.e., unplanned change. Included in this area is what Washburne (1954) calls "sociocultural drift," and what Moore (1963) calls "evolutionary change"; Ogburn (1938) and Sorokin (1937) have dealt with this general kind of change at length. This review will not include work related to this general area, since it is concerned with change resulting from interaction specifically directed at causing the particular change being studied -- i.e., planned change. Moreover, because our concern is with the problem of implementation, which precedes the questions of incorporation and effects, our discussion omits studies related to these stages of the planned organizational change process.

The Adoption and Diffusion Studies

There have been a number of major reviews of adoption and diffusion studies in the past few years (Katz et al., 1963; Lionberger, 1964; Rogers, 1962). Rogers reviewed 506 studies in anthropology, rural sociology, educational and medical sociology. He classified them under the following problem areas: stages individuals go through in the adoption process, characteristics of innovations and their rate of adoption, attributes of early and late adopters, influence of opinion leaders on the flow of ideas, and the role of change agents.

Several general observations may be made about these studies: (1) they generally deal with the spread or adoption of rather simple technical innovations such as hybrid seed, tranquilizers, or audio-visual aids; (2) the agricultural studies have focused on the spread or adoption of innovations among individual farmers residing in a particular county, state, or region; (3) the studies of medical innovations have primarily dealt with their diffusion and adoption by doctors in a single community; (4) the anthropological studies have focused on the spread of such practices as use of new tools, wells, and modern farming techniques within non-industrial societies; and (5) the education studies have primarily dealt with adoption rates of innovations by superintendents of school systems.

From an extensive analysis of adoption and diffusion studies Rogers has proposed a model to explain why individuals do or do not adopt innovations based on the identification of five critical stages in the adoption process: awareness, interest, trial, evaluation, and adoption. A sixth stage, discontinuance, is also suggested. This model has frequently been cited in the educational literature (Carlson, 1965; Eicholz and Rogers, 1964; Miles, 1964) as a useful formulation for analyzing the successful introduction of innovations in schools.

We believe, however, that this model has little use in explaining the implementation of major organizational innovations in schools even though it seems quite plausible to use it to show that independent individuals concerned with simple innovations must first be aware of the innovation, then when interested try it on a small scale, then evaluate it before deciding to use it, and that when one of these stages is missing one can predict lack of use. Its lack of utility is due to a number of its assumptions which are not applicable to the implementation of major organizational innovations. Two central assumptions of this model are that during any of these intermediate stages between awareness and use, the individual is free to decide by himself whether the innovation shall be tried, and if tried, whether it should be continued. If the innovation does not interest him, he is free to reject it. If he is not pleased with the evaluation, he can decide to discontinue the innovation. These assumptions do not apply to major educational innovations in most school situations, for example, those in which teachers are asked to redefine their roles by their superordinates, or in the lower-class urban schools where compensatory programs have been conceived by top administrators and then teachers are supposed to implement them. Moreover, the adoption of a particular program by administrators does not necessarily mean that there will be the appropriate change at the school level. Carlson's research on school superintendents (1965, pp. 74-84) demonstrates that the mere adoption of programmed instruction by a school system did not lead to the desired change at the school level.

Since the model is concerned with the adoption of simple technological innovations by individuals, it also assumes that innovations can be _tried_ on a small scale without necessary interaction with other persons, that trials can be undertaken in an "either/or" fashion by individuals, and that such trials are sufficient to render an effective evaluation. Many of the innovations or programs of the type with which we are concerned cannot be tried on a very small scale, cannot be implemented by staff independent of each other, are so complex that they cannot be tried in an either/or fashion, and many require several years of full implementation _before_ an adequate evaluation can be made.

Not surprisingly, these studies support the generalizations that before any innovation has a high adoption rate among individuals it must be of proven quality and value, easily demonstrable in its effects, have information about it easily available, its cost must be reasonable, and it must be accessible to the adopter (Miles, 1964, pp. 634-639).

In short, while applicable to simple innovations among aggregates of individuals, Rogers' model appears to be of little use in describing and explaining the implementation of organizational innovations.

Antecedents of Organizational Innovation

Most studies of large-scale organizational change give inadequate attention to conditions that may precede but influence the success of a planned change effort. Several studies suggest such conditions, some of which are internal to the organization while others are external to it. A discussion of these conditions is presented in this section.

Greiner, in a paper entitled "Antecedents of Planned Organization Change," examined data from a study of a large, petro-chemical plant where Managerial Grid training was introduced to improve decision-making behavior of 800 managers (Greiner, 1967). The analysis suggests that historical and unplanned forces played an important part in setting the stage and giving impetus to a planned change program. The major implication to be drawn from this work, the author concludes ". . .is that future researchers and change agents need to give greater weight to historical determinants of change, with special emphasis being attached to the developing relationship between an organization and its environment. It is within this historical and developmental context, I think, that we may be able to explain better why a particular 'planned' change program may succeed in one organization but not in another" (p. 52). Greiner concludes that "historical events established important pre-conditions which enhanced the ultimate effect of Grid training. Without these prior conditions, external pressure, internal tension, outside expertise, it is entirely possible that Grid training might have been a 'flop' at Sigma" (pp. 52-53).

In a survey of a number of studies of "organization change" Greiner (1967a) found that four of the eight he classified as "successful" were preceded by a build-up of outside pressure and internal tension. He concluded that one explanation for this is that outside pressure seems to raise a system's level of anxiety, increase the search for relief, and make it susceptible to influence.

The earlier work of Burns and Stalker (1961), Mann and Neff (1961), and Gellerman (1963) supports the notion that organizational members in situations where they have been asked to make frequent changes in their work patterns in the past are more likely to carry through major change requests than members in stabile situations; a past history or prevailing atmosphere of change also may contribute to successful change.

Moreover, Greiner's survey indicated that "success at change" in other organizations was accompanied by a newcomer, *a change agent* intervening at the top of the organization. After taking a number of steps, he presented top management with his conclusions, and either as an official of the organization or as a consultant, then initiated the changes he believed to be necessary. Greiner also noted that some studies advance the notion that how "the mediator" is perceived by organizational members -- i.e., *change agent image*, will also influence success even if he starts at the top (Hovland and Weiss, 1951; Tannenbaum, 1956). A change agent with perceived high prestige and expertise is more likely to be successful in obtaining change than one without such characteristics.

In summary, a number of antecedent conditions that in some situations seem to have had an impact on successful implementation of organizational innovations are external pressure, internal tension, a previous atmosphere of change, and an outside expert with a positive image. We shall examine antecedent conditions of this kind with reference to our case study in Chapter Four.

The Initiation of Organizational Innovations

A central problem of initiation is represented by the question, "How are organizational innovations most effectively initiated?" Many studies and essays emphasize the importance of change agents and participation of subordinates as important determinants of successful initiation.*

In an analysis of the strategies of organization development in six different studies, Buchanan (1967) found that change agents conducting group discussion and T-groups are important factors in most of the six studies. Leavitt (1965) in his analysis of the literature stresses that much of the work in planned change assumes the use of change agents to facilitate initiation -- e.g., Bennis, 1966; Bennis _et_ _al_., 1961, pp. 617-689; and Lippitt _et_ _al_., 1958. Studies in this tradition tend to emphasize the importance of both initial and improving relationships between change agent and client system, initial realization or discovery of a "problem," and initial attempts to analyze the situation and develop or adopt solutions.

The importance of change agents during the initiation phase seems to be based on the following reasoning: in general, neither individual members nor organizations can competently evaluate or diagnose their existing situations. Outside change agents with expert knowledge are able to approach situations in an objective manner, and as a result their analyses are usually more realistic than those of organizational members. They also help increase the amount of communication within the organization which generally leads to more information, greater knowledge, a clarification of problems, and an eventual resolution of conflicts.

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*The notions of "change agent" and "participation" have varying definitions. Some, as Lippitt, use "change agent" to mean simply outside helpers, while others require that the person(s), labeled change agents, actually direct planned change efforts. Some, as Coch-French, use "participation" to mean extent of influence in decision-making, others just simply involvement, while for others simply physical presence is enough.

The importance of subordinate participation in initiating innovations is given greater emphasis in the literature than the need for change agents. Advocates of participation vary as to the amount of participation by subordinates which they believe important. In education, some argue that participation is necessary throughout the total planned change process (Benne and Birnbaum, 1960; Dufay, 1966; Oliver, 1965; Trump, 1967). Others maintain that participation of subordinates is necessary for only certain decisions, for example, in defining the need for change (National Elementary Principal, 1961); in selecting or developing alternative change possibilities (Dentler, 1964); in adopting the specific change (Byerly and Rankin, 1967); in determining the strategy of implementation (Rocky Mountain, 1964). However, some educators maintain that critical decisions about planned organizational change must be made by the administration (Bishop, 1961; Brickell, 1961; Heathers, 1963, 1965, 1967).

Not only is "participation" assumed to be necessary for successful initiation, but more critical for our purpose, it is argued that a strategy of collaborative initiation, one which involves participation of subordinates with superordinates, usually with the involvement of an outside change agent, will have the greatest impact on successful implementation.

Those writers who have stressed the importance of participation of subordinates in planned organizational change have used one or more of the following arguments in support of their views: (1) participation leads to higher morale, and morale is necessary for successful implementation (Bennis, 1966), (2) participation leads to greater commitment, and commitment is important for successfully carrying out change (Goodlad and Anderson, 1963; Mann and Hoffman, 1960; Oliver, 1965), (3) participation leads to greater clarity of the innovation and clarity is necessary for implementation (Anderson, 1964; Gale, 1967), (4) beginning with the postulate of basic resistance to change (Argyle, 1967; Oliver, 1965; Peterson, 1966) the argument is that participation reduces this initial resistance thereby facilitating successful implementation, and (5) that changes introduced "from the top," by superordinates to subordinates who must make the actual behavioral changes (who must implement the innovation), create resistance to making them (Agnew and Hsu, 1960; Wigren, 1967).

While all these lines of reasoning may be plausible, evidence to test the relative effectiveness of strategies of initiation stressing participation in comparison with other methods, for example, imposition from the top, is not available.

Most proponents of "subordinate participation" use as the basis for such advocacy "personal experience," logical argument, or a few industrial studies of change. The study most often used is the Coch-French (1948) study of several groups of workers in a garment factory. To illustrate, arguments for participation put forth on the basis of the Coch-French study are:

> . . .participation is desired (from those affected by the change) in order to (1) decrease resistance to change, (2) develop the most effective processes for a lasting change within the organization, and (3) represent more adequately the needs of the participants involved in the change. The Coch and French studies and the Morse and Reimer studies are excellent examples of this approach. In the case of the former it was found that the experience of being allowed to participate in decisions usually reserved for management (the design of a new job, setting of the price rate, etc.) increased the workers' effectiveness. In the latter, it was found that high control from above tended to reduce the effectiveness of work groups. . . . (Argyris et al., 1962a, pp. 91-93)

However, close scrutiny of the Morse-Reimer (1955) study of the effects of various degrees of subordinate participation in decision-making in a large business shows that both the high and low groups on the independent variable showed significant increases in productivity, the dependent variable. Because of lack of variation in the dependent variable, the study is relatively useless for purposes of arguing about effectiveness of different strategies. Moreover, the Coch-French study (1948), which French (et al., 1960) tried to repeat in a Norwegian factory without success, is rife with methodological deficiencies: lack of control of third variables, improper use of methodological techniques given the size of the sample, and failure to test a number of critical assumptions made in their argument which were testable. For example, it was assumed but not demonstrated that members of experimental groups, because of their participation, saw the need for change and therefore had a more positive attitude toward changing.

The kinds of evidence required can only come from carefully conducted longitudinal studies of large numbers of organizations in which the major independent variable would be type of initiation strategy used and the dependent variable would be degree of implementation, and with the presumed intervening variables such as morale and clarity systematically studied. Investigations of this kind are, unfortunately, not available.

When both conditions, the presence of a change agent and participation of subordinates, are explicitly proposed together as necessary for an effective strategy of initiation, the result is the notion of "power equalization." The proven effects of participation in connection with the use of an outside change agent are doubtful, as Leavitt (1965) notes:

> Bennis, Benne, and Chin in their reader, The Planning of Change (1961), are so enamored of it that they have quite specifically set out power equalization as one of the distinguishing features of the deliberate collaborative process they define as 'planned change' in organizations. A power distribution in which the client and change agent have equal, or almost equal, opportunities to influence is a part of their definition of 'planned change' . . . . The issue of validity remains a critical and difficult issue. When empirical studies have been undertaken to evaluate outcomes, the results have been equivocal at best. . . . Even several of the individual case analyses. . . have led to equivocal or negative results. PE practices have been carried much more by their transferable operational techniques and by their impact on persons than by their demonstrated results. (pp. 1158-1159, 1167)

Herzberg, Mausner, and Snyderman (1959) indicate similar doubts about the validity of propositions about the effectiveness and desirability of the participation of subordinates:

> The idea, first, that the participation of subordinates in decision-making was possible, and second, that it was desirable has been the subject of a great deal of controversy. . . There is no question that a genuine attempt to extend the scope

> of participation has been made in some places. The interpretation of these attempts and of their purported success is far from clear. . . . Within certain limits, it is likely that more latitude than is currently available to most people in industry can be given to individuals to develop their own ways of achieving the ends that are presented to them by a centralized authority. This is a reasonable solution to the problem of motivation, more reasonable than the usual formulation of participation. To expect individuals at lower levels in an organization to exercise control over the establishment of over-all goals is unrealistic. Thus, when participation is suggested in these terms, it is usually a sham. (pp. 127-128, 137)

As they note, even if "participation" were shown to be "effective" it is not clear that subordinates are competent to or desire to make major decisions about organizational changes. The implications are serious since a great many hopes are being placed currently in vertically initiated programs -- e.g., compensatory programs, where the implementer-subordinates at the school level have had little to say about the nature of these programs being introduced. Are they predestined to failure because of imposition? Currently, data are unavailable to settle the question.

In summary, our review of the literature revealed that two conditions, the use of "change agents" and "participation," are generally thought to have a bearing on initiation for two reasons: first, because they are believed to be strategic variables for successfully initiating change proposals, and second, because a strategy of initiation using a change agent and subordinate participation leads to successful implementation of the initiated change. However, there is a paucity of research evidence to support the proposition that participation, with or without the presence of a change agent, leads to a greater degree of implementation; there is, even less evidence to support, empirically, that participation does so because of its effects on conditions such as clarity, morale, commitment, lowering of resistance, or by-passing the creation of resistance. Also, the assumption that resistance to change generally exists in an organization is, to date, far more rhetorical than empirical.

Moreover, the argument that major change initiated from the top creates resistance or fails to dissipate resistance existent in an organization has been buttressed with little or no evidence nor has it been shown that imposition from above itself causes resistance. The assumption that it is the vertical initiation of innovations by administrators that leads to implementation failures or rejection of innovations is problematic. What is more important for our purposes is that the literature stresses that the strategy of initiation used will have an impact upon the degree of implementation that follows. The relevant issue, is, "Which is the more efficacious in bringing about successful implementation, vertically initiated innovation, that is, an innovation conceived and initiated by top management, or a collaboratively initiated innovation, that is, where subordinates in participation with top management and/or outside change agent decide on the innovation to be implemented?"

Our study is concerned with a vertically initiated innovation in a school. Because of its possible importance to the implementation of the innovation, we will explore the extent to which the strategy of vertical initiation of an innovation had an impact upon the subsequent degree of its implementation by the teachers. This matter will be considered in the final chapter.

The Implementation of Organizational Innovations

The greater attention given to initiation than implementation in the literature is illustrated by Lippitt, Watson, and Westley's The Dynamics of Planned Change (1958). They view "planned change" as a deliberate and collaborative process involving a change agent and a client system, and discuss in detail studies concerned with the training and the role of the change agent related to problems of initiation: helping organizations develop an awareness of the need for change, helping organizations clarify and diagnose both internal and external problems, establishing a firm change-relationship, and helping organizations examine and select alternate solutions and goals. The only attention they give directly to what we are calling implementation and which they label "Phase 5" is in the section of their book on "The Transformation of Intentions Into Actual Change Efforts," (pp. 139-140) and "Change Methods Used in Phase 5: The Initiation of Change Efforts" (pp. 221-226). In fact, they end their brief discussion by saying, "In our sample of change projects many agents do not speak of their efforts to provide either direct or indirect support for change efforts in the client system's sphere of existence. As a result, we can report here only a limited variety of methods appropriate to Phase 5. Much creative work remains to be done in developing methods for use in this crucial part of the helping process" (p. 226).

In the smaller part of the POC literature that deals with the actual period of implementation, many "facilitators" of implementation were mentioned. Those most often considered were: (1) external and internal support for the change (e.g., Brickell, 1961; Fantini and Weinstein, 1963; Wigren, 1967); (2) adequate funding (e.g., New York, 1965; Miller, 1967); (3) adequacy of plan for meeting organizational members' needs and the organizational problem under consideration (e.g., Fowler, 1956; Lippitt, Benne, and Havelock, 1966; Parloff, 1960); (4) member acceptance of the need for the change (e.g., Abbott, 1965; Fantini and Weinstein, 1963); (5) retraining of members for new tasks (e.g., Heathers, 1967; Jung, 1966; York, 1955-II); and (6) the presence of a change agent for giving needed support and advice (e.g., Brown, 1966; Fantini and Weinstein, 1963; Lippitt, Benne, and Havelock, 1966; Radcliffe, 1967). While some authors stress the importance of one or two conditions, others place emphasis on many. Unfortunately, most of these reports and essays are weak both conceptually and methodologically.

They are weak conceptually because they fail to recognize that the implementation of complex organizational innovations involves a process (Ginzberg and Reilley, 1957) and an interrelated set of conditions that can shift over time -- e.g., the acceptance or the clarity of a change proposal. Nearly all reports presently in the literature treat conditions as unchanging and implementation as the result of an accumulation of individual conditions rather than as a result of an interrelated, complex set of forces.

Many criticisms can be made of the literature on the implementation of innovations on methodological grounds. Conditions isolated as barriers or facilitators to implementation are generally not "uncovered" through rigorous and systematic analyses of organizations undergoing change. Rather, written largely from the perspectives of practitioners and/or active change agents, most explanations are based on highly subjective accounts of their experiences during an effort to introduce an educational change. Typically, no supporting evidence is offered about conditions that are presumed to serve as important factors influencing organizational change. With few exceptions (e.g., Greiner, 1965) the intent is not to test or generate either hypotheses or theories about implementation but to report change experiences or to advocate the importance of certain factors.

A great deal of the literature turns out to be hortative in nature, founded on either no evidence or highly questionable evidence. For example, Bennis (1966) in his most recent work Changing Organizations, after noting (p. 175) that the problem of implementation is a "continually vexing one," nevertheless proceeds to note without supporting evidence a number of facilitators or "shoulds" during implementation efforts:

> The *client-system* should have as much understanding of the change. . . . The *change effort* should be perceived as being as self-motivated and voluntary as possible. . . . The *change program* must include emotional and value as well as cognitive (*informational*) elements for successful implementation. . . . The *change-agent* can be crucial in reducing the resistance to change. . . . (p. 176)

In a recent article "Barriers to Change in Public Schools" Carlson (1965a) specifies three often mentioned major *barriers* to change without evidence to support his contentions. The obstacles he cites are lack of a change agent, lack of awareness about new educational practices (knowledge utilization, etc.), and insufficient pressure on or need for schools to change:

> Part of the explanation of the slow rate of change in public schools according to many students of organizational change, lies with the absence of an institutionalized change agent position in public education. A *change agent*. . .can be defined as a person who attempts to influence the adoption decisions in a direction he feels is desirable. He is a professional who has as his major function the advocacy and introduction of innovations into practice. . . . In addition to the lack of a change agent, schools are also handicapped in change activities by the weakness of the knowledge base about new educational practices. . . . There is no struggle for survival for this type of organization service in organizations like schools -- existence is guaranteed. Though this type of organization does compete in a restricted area for funds, funds are not closely tied to quality of performance. These organizations are domesticated in the sense that they are protected by the society they serve. . . . it seems reasonable to suggest that the domestication of public schools is a hindrance to change along with the lack of a change agent and a weak knowledge base about educational innovation. . . . (pp. 4-7)

In a typical school report, (1967) C. L. Byerly, Assistant Superintendent, and Stuart C. Rankin, former Curriculum Coordinator for Detroit's Nongraded Program, make a series of recommendations based on their impression of factors related to successful implementation: the timing of introduction, the line-staff relationships, the instructional leadership of the principal, and the need to provide help to teachers:

> One of the difficulties which accrue to a city-wide change is the development of some feeling of "Do we have to do this?" rather than "Can't we do it, too?" Other school systems should consider the alternative of expanding similar programs more slowly. . . . The line-staff relation may be a critical factor in the expansion of new programs in other school systems, as it is in ours. We strongly recommend that guidelines, purposes, calendars, and bulletins be developed jointly by those with line and staff responsibilities. This combination was most effective in Detroit. . . . Two items which have received some emphasis in Detroit. . .but which we believe should receive a great deal more attention are (1) instructional leadership by the principals and (2) more attention to helping teachers with the management of flexible grouping in the classroom. Willingness to delegate authority and share decision-making on instructional matters with the staff is an essential ingredient in sound leadership by the principal. . . . (pp. 44-45)

An appraisal of this document as well as many others reveals that they typically include a set of assertions about conditions posited as important to obtaining successful implementation which are not supported by empirical evidence. These circumstances are usually based on the testimony of practitioners in their reports and the reliability of their observations is open to serious question. Since most studies are accounts of change efforts tried, they usually contain interpretations at the end and a list of "problems" encountered. They provide the reader with a vague description of what actually took place, or the actual extent of change. The fundamental problems with such studies and their interpretations are raised by Barnes (1967) in the following passage:

> This problem need not concern us if we are interested only in organizational change, but it becomes crucial as soon as we turn our thoughts to the *study* of change. Some behavioral scientists (e.g., Blake and Mouton, Argyris, Shepard, Bennis, Sofer, Rice, Jaques, Trist, F. Mann) seek and apparently achieve proficiency in both areas. But behavioral scientist critics decry these dual attempts to change organizations and also do research on the changes. The possible bias of social scientist involvement is of major concern. . . . In essence, the critics of observer "involvement" want a science built upon the observation of human behavior rather than a science which involved attempts to practice as well as observe. Observers, so the reasoning goes, remain detached and relatively objective. Participants become involved and overly subjective; they begin to overvalue and push their own beliefs and "normative" theories. (pp. 74-75)

Some reports about innovations in schools, which specify changes in the behavior of teachers, do mention or discuss teacher variables such as their attitudes, their acceptance of the innovation, and their capabilities. However, most ignore the perspectives of teachers and typically present only the administrators' or outside change agents' perceptions of the attitudes or performance of the faculty. Two recent books serve as excellent examples, one about the implementation of team-teaching in a high school (Peterson, 1966) and the other a case study of an effort to implement nongradedness in an elementary school (Glogau and Fessel, 1967). Both studies are written from the perspectives of the educators who administered the programs. They fail to report objective accounts of what teachers said, felt, or how they behaved. Instead, Peterson gives a very general account of *his* perceptions of what went on; Glogau and Fessel, on the other hand present page after page of their interpretations of staff meetings. Teachers comments, when presented, are restricted to their perceptions about their pupils' reactions.

In both books teachers' actions and reactions are filtered and interpreted by people with "vested" interests. The validity of their perceptions of the change agent or administrator are open to challenge and such procedures lend weight to the criticism offered by Barnes. One may legitimately hold reservations about the reliability and utility of findings presented in such reports, and of a literature that consists primarily of these kinds of studies.

Reports often fail to use adequate data to assess the degree of implementation. Some state that successful implementation occurred but the evidence is based on very subjective personal assessments (Childs, 1966; Dufay, 1966; Marland, 1967; Wigren, 1967). Others offer no evidence at all. For example, an administrator (Gale, 1967) presented a description of factors related to the implementation of nongradedness in a local school system but no data were presented to buttress the alleged successful implementation of the innovation.

Some investigators have used questionnaires or interview responses to document behavioral changes of teachers. For example, in an educational study that focused on the relationship between types of leadership behavior and the degree of implementation of comprehensive classroom curriculum plans, the extent of classroom change was measured by interviews with the teachers (Kline, 1966). In a hospital study where the author was attempting to measure the impact of four factors on the extent to which ward nurses changed their role behavior according to different therapeutic-milieu-schemes, the extent of change was measured by self-administered questionnaires (Parloff, 1960). However, the author notes that such procedures may lead to an overestimate of actual change. In a larger study, Wilkie (1967) tried to analyze the degree to which a school system's model school implemented team-teaching and non-grading, among other innovations. The analysis was based completely on teacher interviews.

The use of interview responses or subjective appraisals in inquiries as the basis to determine extent of organizational change has important implications for their conclusions. Having once "determined" the degree of organizational change from such data, investigators search for conditions they take to be explanatory. However, if the operational definitions of the degree of organizational change are highly questionable, then the conditions isolated can hardly be viewed as explanatory. The importance of getting an accurate measure of the dependent variable in any study cannot be overstressed. Work based on actual systematic observations of the behavior in question is clearly a necessity. Our awareness of the importance of obtaining an objective and unbiased measure of the degree of implementation led us, in this investigation, to obtain direct classroom observation of teacher behavior and to use formal assessment procedures and observation schedules (Chapter Five).

Our review indicated that the literature is deficient in several important respects. First, there has been little concern for testing relevant theories or generating testable hypotheses about factors influencing degree of implementation. Second, data used to isolate conditions having an impact on implementation are not obtained from the perspective of those who must make the behavioral changes specified by the organizational innovations in addition to those who initiate them. Third, careful measurement is not made of the degree of actual implementation; this would require collecting and analyzing data based on systematic observations and not using data about "effects" as indices of successful implementation.

The Implementation of Organizational Innovations: The Major Explanation Found in the Literature

Implicit in the social science literature on deliberate or planned organizational change is a definition of the problem of the implementation of organizational innovations that deserves to be made explicit: the problem is conceptualized as essentially one of overcoming organizational members' resistance to change. Argyle's (1967) consideration of change in organizations provides a good illustration of this type of formulation of the problem. He states:

> In the first place, there is usually resistance to change of any sort. . . . In social organizations, patterns of behavior become established and are of great stability because individuals work out drive-reducing ways of adapting, and fear that any change will be to their disadvantage in some way. Changes in industry are resisted by workers because they are

> afraid that they will be paid less or will have to work harder to earn the same amount. Wage-incentive schemes have often foundered for this reason. Changes are resisted by managers because they are afraid that their position will be weakened somehow or that they will be further from the center of power. Current changes in prisons are resisted by prison officers and prisoners alike because they have no desire to associate with each other. . . . There is anxiety either about possible material loss or about the disruption of a well-established and satisfying social system (p. 95).

As a consequence of this definition of the problem of planned organizational change, most efforts to account for the success or failure of attempts to implement organizational change have focused on the ability of management or a change agent to overcome members' initial resistance to change.* Thus Argyle, (1967) after his enumeration of a number of reasons why organizational members will resist change, states, "It may be impossible to bring about change in the teeth of such resistance, and it is usually possible only if the new scheme can be shown to be advantageous. This may be achieved by means of financial incentives, honorific ranks, training courses, or by sheer persuasive skill" (p. 95).

The premise of organizational members' resistance to change appears to be the basic assumption underlying the power-equalization concept (Leavitt, 1965) that has been so frequently invoked to account for the differential success of organizations to implement innovations. This theory assumes that if innovations are introduced by management into an organization without prior involvement in their formulation by the organizational members who must implement them, they will offer resistance to the innovation; it is further assumed that this resistance constitutes the major obstacle to the implementation of innovations. The theory then posits that to overcome this resistance, management must share its power with those who must implement innovations by allowing them to participate in the decisions about the change to be made. Through involving members who must implement the change in its formulation, it is assumed that they will perceive the innovation as self-imposed and thereby become committed to it. On the basis of these assumptions, it is reasoned that the extent to which organizational changes are implemented can be attributed primarily to the degree to which there is power equalization between management and subordinates in the formulation of innovations.

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* For examples see Argyle, 1967; Bennis, 1966; Coch and French, 1948; Lawrence, 1954; Zander, 1961.

Thus, in discussing styles of administration as they bear on organizational change, Argyle (1967) maintains:

> The main principle here is that subordinates should be persuaded and motivated rather than ordered -- so that they actually want to behave in the new way. This persuasive and democratic style means allowing people to take part in discussion and decisions (p. 94).

And Leavitt (1965), in his review of the power equalization approaches to organizational change, notes:

> Power equalization has thus become a key concept in several of the prevalent people theories, a first step in the theoretical causal chain leading toward organizational change. It has been constructed as an initial subgoal, a necessary predecessor to creative change in structure, technology, task-solving, and task implementation. Although the distances are unmarked, there is no obscurity about direction: a more egalitarian distribution is better (p. 1159).

The premise of resistance to change on the part of organizational members also appears to underlie the large body of group dynamics literature that deals with the problem of organizational change. A major theme of this literature is that through human relations training in sensitivity or T-groups, organizational members' resistance to change can be "unfrozen" and a positive orientation to change can be instilled in them.[*]

In appraising formulations that view the problem of implementing organizational innovations as basically one of overcoming organizational members' initial resistance to change, we concluded that they appeared to be too simplistic because they ignored many other circumstances and conditions that could have an important bearing on the success or failure of the implementation of innovations. Three general and interrelated conditions that these formulations disregard and that seem to us to be of critical importance are: (1) organizational members who are not resistant to change may encounter obstacles in their efforts to implement an innovation which may make it difficult or impossible for them to carry it out; (2) individuals in organizations are in part dependent upon members of their role set to overcome these obstacles and they may or may not fulfill them; and (3) members who are initially predisposed to accept organizational change may later develop a negative orientation to an innovation, and therefore be unwilling to implement it, as a consequence of the frustrations they have encountered in attempting to carry it out.

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[*] For specific examples see Argyris, 1962; Bradford, Gibb, and Benne, 1964; Jacques, 1951; Miles, 1959; Lewin, 1947; Schein and Bennis, 1965; for reviews of the work related to this area see Greiner, 1967; Katz and Kahn, 1966; Leavitt, 1965; R. E. Miles, 1965.

When we review the findings of our case study in the final chapter we shall consider whether they offer support for the reservations we have expressed about the way the problem of the implementation of organizational innovations has generally been formulated and shall examine the implications of our inquiry for the extension of theory about the successful implementation of organizational innovations.

Summary

This chapter presented a review and an appraisal of studies and essays on planned organizational change with special reference to the problem of implementing organizational innovations. We maintained that the model growing out of diffusion and adoption studies has little use in describing and understanding what transpires during an organizational implementation effort. Turning then to the planned organizational change literature, we examined the literature that suggested that conditions both internal and external to an existing organization prior to the actual planned change effort may have an impact on the degree of implementation. We also noted that some writers have suggested that the particular strategy of initiation used might also influence the degree of implementation. We observed that only a small part of the literature focused

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on the period during which the implementation effort occurred and that most studies had serious methodological and/or conceptual deficiencies.

This review of implementation studies corroborated the observations of Bennis, Guba, Heathers, and Stufflebeam about the paucity of knowledge concerning the problem and process of the implementation of organizational innovations. Our review revealed that the major explanation currently being offered to account for the success or failure of organizations to implement innovations assumes that there is initial resistance to change on the part of their members and that it is the ability of management or a change agent to overcome this resistance that accounts for the success or failure of efforts to implement innovations. We argued that this explanation was too simplistic because it ignored three conditions that may exist or arise in organizations. First, it disregards obstacles to which members who are not resistant to change may be exposed when they make efforts to implement innovations; second, it gives no consideration to the possible importance that management, as part of the role set of subordinates, may play in creating or overcoming these obstacles; third, it overlooks the possibility that members who are initially predisposed to accept an organizational change may later, because of frustrations they have experienced in trying to implement it, develop a negative orientation to it, and thereby be unwilling to implement an innovation.

We concluded that most social scientists have not recognized the need to conceptualize the success or failure of the implementation of organizational innovations as the result of a complex set of interrelated forces that occur, once the innovation has been introduced, over an extended period of time. Moreover, we maintained that what has been left out of their formulations is a conception of this process which stresses critical problems facing members when they attempt to implement innovations and a recognition of the possible importance of the role of management in this process. Our review indicated that there was a great need for in-depth studies of organizations, such as schools, trying to implement organizational innovations in order to isolate factors that inhibit and facilitate the implementation process. These studies, we contended, were also needed if heuristic models and hypotheses about the implementation of organizational innovations were to be developed.

Chapter 3

RESEARCH METHODS

In this chapter we consider the major methodological problems encountered in the study and the research techniques used to secure data to answer the central questions of the investigation.

Rationale for the Case Study Method

Three basic types of research design have been used in the study of formal organizations: the sample survey, the controlled experiment, and the case study (Blau and Scott, 1962, p. 18). In this inquiry, we used the case study method. This method is designed: ". . .to utilize to the full the advantages of seeing the situation as a whole and of attempting to grasp fundamental relationships. From this. . .can come the insights which can furnish the hypotheses for later, more detailed, quantitative study" (Katz *et al*., 1953, p. 75).

The case study method was selected as the basic research procedure of the inquiry for several reasons.* This research strategy (a) permits the exploration of a complex organizational problem over time, (b) permits in-depth direct observation of changing conditions in an organization, (c) makes possible the wide use of a number of data-gathering methods including direct observation, formal and informal interviewing, and the examination of relevant public and

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*For detailed discussions of the case study method, see Lipset *et al*., 1956; Scott, 1965.

private documents, (d) allows spending relatively sustained periods in the field gathering data, and (e) permits exploring tentative theories and forming preliminary hypotheses during the actual period of data gathering. In addition, on social science issues about which our knowledge is limited, for example factors influencing the actual degree of implementation of organizational innovations, the case study method is useful for suggesting hypotheses and theoretical formulations for later empirical examination.

Although the case method appeared to be the most appropriate procedure to use for our inquiry in light of the nature of the problem and our current state of knowledge about it, it is nevertheless important to note two of its serious limitations. One is that an investigator can neither prove the validity of his conclusions nor generalize the findings to other situations on the basis of a single case study. Second, there is the danger of an erroneous interpretation of the data due to the investigator's biases or his analytic techniques. The awareness of these pitfalls led to precautionary measures that will be discussed later.

Selection of the School

In September of 1966 members of the project staff were engaged in exploratory talks with key educational administrators in the New England area about the possibility of conducting intensive case studies of elementary schools in slum areas characterized by high and low "academic productivity." During one of these meetings the

Director of a newly created Bureau of Educational Change in a city school system informed us that large-scale organizational innovations had been proposed and were being initiated in three schools that were under the control of his office. He expressed a strong interest in understanding more about the process of organizational change.

We noted that intensive and sustained case studies of responses of schools to major educational innovations could be of value both to educators and social scientists interested in the process of planned organizational change. We were assured by the Director of his full support and cooperation if we decided to carry out such a case study in the elementary school under his jurisdiction. He also felt that we would have no difficulty obtaining the approval of the Superintendent of Schools for such a research project. In addition, from the Director's description, the elementary school appeared to be small enough for one field researcher to conduct an intensive and sustained case study of it. The decision to accept was made in the middle of October, 1966.

The Case Study Method: Problems and Procedures

Social scientists who set out to do intensive studies of schools need to develop rapport with teachers and administrators prior to collecting data. If rapport is not established with organizational members before observing or interviewing them, hostility or lack of cooperation may occur during field work activities.

A case in point in the school where we conducted our research was the reaction of the teachers to the members of an inter-university evaluating team employed by the Bureau to assess the performance of the school. Its director evidently assumed that it was unnecessary for the six-man observation team to establish rapport with the teachers before they entered the classrooms to observe them. The teachers not only distrusted the evaluation group, they also were upset about the way the team was observing classroom interaction. Upon entering, members would move around the room between children and teachers with a clipboard and pencil in hand to make notations. They frequently became involved with children, either to ask questions or to react to their advances. The hostile reaction of the teachers and their administrators to the "unwelcome" observers entering their classes nearly led to the abandonment of this effort of assessment.

There is a problem, one never resolves completely, in observing an ongoing social system such as a classroom; it is that the procedures of observation employed, indeed an observer's very presence, can influence in a critical way the interactions he desires to observe. The careful investigator will, therefore, try to adjust his procedures and behavior to minimize the possibility of altering that which he wishes to study. In the case of the evaluation team this problem was also initially not considered. The behavior of the observers in the classrooms could have directly and seriously contaminated their classroom findings; in addition, the resented intrusion could indirectly lead to contamination through altered teacher behavior.

In carrying out this study, we encountered the following methodological problems: (1) securing administrative permission to do the case study, (2) gaining entrance into the school, (3) defining the role of the field worker who collected the data, (4) establishing rapport with the staff, (5) collecting data.* We now will discuss how we attempted to cope with them.

1. Securing Administrative Permission

Social scientists who wish to conduct studies in school settings often meet initial resistance from their educational administrators. We did not encounter this circumstance since, as noted earlier, the Director of the Bureau of Educational Change had a positive orientation to the proposed study from the outset. Prior to the initiation of field work activities, several meetings were held with him, his top level assistants, and the administrator who headed the school. In these sessions we discussed the way we proposed to conduct the research and the kinds of information that we hoped to obtain. These meetings also provided an opportunity for the administrators to raise questions about such matters as the length of the study and the type of cooperation that would be expected of them. In addition, they allowed us to obtain a great deal of needed information about pupil characteristics, the staff, the educational program, and the neighborhood in which the school was located.

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*This rubric is quasi chronological -- e.g., analysis was continually going on during data collection; data collection began during efforts to establish rapport. Also, often the same procedure had implications for more than one activity -- e.g., preliminary meetings with staff specialists from the school not only facilitated entrance but also facilitated rapport.

The following set of tentative agreements were arrived at during these meetings: (1) one member of the project staff would be used as the investigator who would collect the necessary data at the school; (2) he would be permitted to remain at the school for as long as we felt it necessary to obtain the data required; (3) we could use whatever data collection methods we felt appropriate to study the process of organizational change -- provided that they would not interfere with the operation of the school; (4) the role of the field worker would be that of an observer and not that of an advisor or evaluator; (5) we would share the essence of our findings with the school administrators; and (6) the anonymity of the school and its personnel would be guaranteed.

Letters were sent to the Associate Superintendent of the school system and to the Director of the Bureau of Educational Change (see Appendix B-1) on October 21, 1966, that spelled out these agreements and ended with a request for formal permission to carry out the study. Shortly thereafter, we were informed that the Associate Superintendent and the Director had discussed the project and that they approved of the research. We began our field work activities at the school for the first time on Monday, October 31, 1966.

2. Gaining Entrance Into the School

The next issue centered on how to gain entrance into the school in the most facilitative way. During meetings with the administration this issue was discussed several times. There were two problems to be overcome. First, we did not want the field researcher to be identified with the administration. Second, we did not want the teachers to be skeptical of his presence because of their negative feeling about research conducted at the school during the preceding summer.

It seemed wise to let the administrators suggest what the best way to enter the school might be since they "knew the ropes." Several alternatives were discussed; one was to hold a big meeting at which the entire project staff would be introduced to the teachers and would explain our study. Another was simply for the member of the staff to be used as the field worker to come to the school unannounced. One of the administrators proposed that before making the decision, we should meet with the three subject specialists in the school and discuss the problem of entry with them.

This suggestion was followed at a luncheon meeting. The three specialists felt that because of the difficulties encountered in the summer, the most efficacious procedure would be for the field worker to enter the school with as little fanfare as possible, but with "inside" support. They volunteered to tell the teachers informally that a social scientist was coming to spend some time to observe, to learn about the process of change and to pinpoint the problems teachers faced during this process. We agreed with this proposal since it had the merit of not only minimizing the possibility of initial teacher resistance but also of minimizing the chances that the teachers would perceive him as a "company man" put there by the administration "to snoop."

This strategy proved to be sound. The specialists did an excellent job of preparing the ground for our staff member's arrival. From his first day at the school the teachers appeared to be accepting and interested in the study and not hesitant, generally, about expressing their honest views to him. While his later experiences revealed some feelings of apprehension and mistrust from several members, the overwhelming majority never showed any resentment nor felt that he was an agent of the administration. The atmosphere throughout our field work experiences was extremely positive.

3. Defining the Role of the Field Worker

Investigators can attempt to define their role in various ways in conducting intensive case studies of schools; for example, they may adopt the role of a disguised worker or that of a participant observer. It was decided, for several reasons, that the most appropriate role for the field worker would be that of a non-participant observer; first, because it had been agreed that we would not interfere with ongoing activities of the school;* second, because we wanted to minimize the possible effects of our staff member's presence on what transpired in the school during his field work activities; and third, because we wanted to be assured that he had maximum freedom of movement while in the school. That the teachers perceived his role as a non-participant observer is evidenced by the statements to the effect that "the field worker has been in the best position, the most objective position, to judge what's been going on. . .," and the assertion of the Director that, "I have never once heard a negative word about you from the school personnel. . . ."

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*For a brief review of effects of researchers on organizations especially under laboratory conditions see Barnes (1967, pp. 82-90).

We tried to minimize his effects during his field activities on the operation of the school as much as possible. To illustrate: the Assistant Director who was responsible for the overall management of the school was in a strategic position to influence teacher attitudes and behavior. We decided not to interview him formally during the field work stage of the study, but to wait until afterwards, to avoid the possibility that questions would lead him to do things differently than he intended. This decision was made to minimize our influencing the organization's "natural processes," even though the information might have been very useful during the field work period. In spite of all the precautions we tried to take, however, we were not totally successful in minimizing the researcher's effect on interactions among school personnel. Two instances stand out most clearly. During a conversation with three staff members early in his field experience, one was complaining that the Director almost never visited the school. The others agreed but none offered an explanation for why they thought he came so infrequently to the school. The investigator raised the question, "Why hasn't anyone asked him?" This comment resulted in one of the staff going to the Director to find out what the reasons were and to ask him to come more often. In another situation, at the end of a formal interview, the teacher told the field worker that, as a consequence of the questions he had raised, it was now clear to her that she and the Director had a fundamental disagreement about one of the basic assumptions of the educational program.

The influence of the observer on the organization being studied is one side of the picture; there is another. While the role of non-participant observer implies the desire not to influence what he is observing, it does not follow that no interaction can take place between observer and the observed. Indeed lack of interaction may lead organizational members to perceive the researcher as odd, snobbish, or uninterested in their behavior and might cut off vital information that members might offer or reveal to him. Thus, the researcher must establish a positive relationship with those he is studying but the line is a fine one between maintaining a positive relationship and one that is too positive or negative. The problem is, as Scott (1965, p. 272) puts it, "The observer's relationships with subjects may influence what it is he observes or the report of his observations." We tried to handle this matter through staff discussions in which this issue was frankly examined. These meetings were useful in articulating the feelings and the perceptions of the field worker; challenges to his interpretations frequently required gathering additional evidence to resolve questions that had been raised.

4. Establishing Rapport at the School

We engaged in a number of activities to establish and maintain rapport with the school staff. We rejected the idea of the field worker being introduced by the Assistant Director to the teachers because of our concern that they would identify the project as affiliated with the administration. Instead, we decided that he should introduce himself during the first few days, as occasions presented themselves, to teachers individually, to teachers in the halls or aides' room, and explained the purpose of his presence by saying: "I'm here as an observer interested in understanding what happens in a school when it tries to change, and also I'd like to find out what kinds of problems teachers face during this process." He tried to make it clear that our project was not associated with the school system by saying: "I'm a member of a large research project engaged in a number of studies of schools trying to change sponsored by Harvard University; I hope to stay here for several months."

We felt that he could increase his rapport with the staff by stressing that he was an impartial onlooker who would treat information in an anonymous and confidential manner. On many occasions during those first few weeks teachers tested his objectivity. They asked him, when alone or in groups, what his opinions were about many educational issues, for example, teacher discipline and types of curriculum. They also asked about what he was observing in their school. The researcher adopted the posture of telling them always in a pleasant, smiling way, that he was a learner; that he did not want to evade their questions but really had no firm convictions on any of these matters; and furthermore, that many of these issues were so complex that they could not be answered simply. He always tried to give the teachers the feeling that he had no qualms about their statements or behavior, and tried never to criticize them or take sides on issues.

His promise of confidentiality and anonymity was also tested. There were several instances during the first few weeks when teachers, either inadvertently or intentionally, asked him about what others had said regarding a particular subject. If the information was not confidential the researcher would repeat what was said in a general way so as to maintain a feeling of cooperation but without giving the impression that he was gossiping. When viewing the information as confidential, he would simply say in a pleasant way that this was told in confidence and therefore, he did not feel free to disclose what was said.

These tactics seemed to work. After several weeks, no questions were raised about his opinions or about what others had said; moreover, most teachers displayed no hesitation in expressing their personal feelings about the Director, the Assistant Director, and their future plans. He reported that a number of discussions about such matters were held among the teachers in his presence. Although evidence, to be presented later, suggests that several members of the staff were not completely candid with him, other evidence, obtained through the various data collection methods employed, indicated that most of them were frank in expressing their views. The Bureau of Educational Change and the administration and staff of the school gave excellent cooperation during our field work activities. All our requests that were within their power to grant, including such matters as interview time, attendance at meetings, perusal of private documents, and classroom observations, were honored.

In an effort to maintain good relations with the staff and to express appreciation for their cooperation, we permitted the researcher to be helpful in ways that would not affect the study. For example, he tried to get information about the anthropology curriculum at Harvard for one teacher's daughter who was doing a report on this subject at school and to find out the application status of a relative of the Assistant Director at the school to the Graduate School of Education. Although there were several social invitations from staff members during the months of field work, he declined each of them with the explanation that others might get the wrong impression if he accepted, while adding, however, that he would be happy to get together after the field work was completed.

In view of the cooperation received, these procedures seemed to be efficacious. However, it should be noted that the favorable balance of obligations and acceptance of favors can be difficult. Blau and Scott (1962, p. 24) indicate one possible pitfall: ". . .the observer can produce a favorable balance of obligations which motivates the members of the organization to cooperate with the research. But it should be mentioned that there is the opposite danger of having respondents too eager to cooperate, since this situation may also bias their verbal statements as well as their overt behavior." Another pitfall is that a great deal of cooperation on the part of organizational members may lead the observer to accept uncritically their assessment of events. Through attempting to obtain additional evidence and through conversations with the other members of the research staff, we attempted to minimize such biases in interpretation of the data obtained during the case study.

5. Collecting Data

Different methods of data collection were stressed at different times during the study. The major techniques for collecting data during the phases of the inquiry are presented below:

Phase I: October 31 - January 31

- Non-participant observation
- Informal discussions
- Perusal of documents

Phase II: February 1 - April 13

- Longitudinal, formal interviewing
- Non-participant observations

Informal discussions
Perusal of documents

Phase III: April 14 - May 12

Systematic observations of classrooms
Self-administered questionnaires
Non-participant observations
Informal discussions
Perusal of documents

The differential stress on these various methods of data collection during the several phases of the field study were designed to provide the following types of information and data: (1) a detailed picture of the school prior to the announcement of the major innovation; (2) a description of what happened between the initial announcement of the innovation in late November and (3) an assessment of the degree of its actual implementation by teachers at the beginning of May. The data were gathered in a way to permit focusing on teachers' perceptions of the innovation and on the strategy used by the Director to obtain implementation of this proposed change by the teachers.

We now turn to a discussion of the methods used to obtain data and the problems that were encountered in each of the three phases of the study.

Phase I. A great deal of the first month was spent by the field worker getting to know members of the staff and developing a feeling of trust in this relationship. The decision to do this was made before his entrance into the school because we were informed of the unfortunate experiences various members of the faculty had with a previous investigator during the preceding summer. In addition, as noted earlier, we felt that it was absolutely necessary for him to establish rapport if we were to obtain full cooperation from the teachers. One way the field observer did this was by having coffee with them in the aides' room in the morning and during recess, and chatting with them about common experiences as teachers and mutual interests; he attempted to be impartial, honest, and especially non-critical in an effort to establish rapport with the total staff. Another way that was employed to establish rapport at the outset of the study was to ask questions that were non-threatening concerning matters such as what was currently being tried, the current school situation, and the "formal and informal rules of the game." Obtaining cooperation from the staff was especially facilitated by one particular teacher with whom the investigator had an excellent relationship from the beginning. Not only did he volunteer a great deal of information of a confidential nature, but he also acted as an intermediary between him and other teachers during the initial weeks of the study.

In many respects the initial phase was a probing one. The non-participant observations, informal talks, and collection of documents were employed to get a general description of the organization, teachers' definitions of the situation and their attitudes toward the administrators and each other.

During this initial period the field observer usually spent three days out of each week, randomly selected to guard against bias, in the field. Most of his time was spent at the school, but occasionally he went to the Bureau of Educational Change for a meeting or informal conversation with the Director or his assistants. Usually arriving at the school at 8:30 and seldom leaving before 2:30, he also remained quite often for staff meetings, held from 2:30 to 4:00 on Monday and Wednesday of each week. The other two days were spent at the University planning, writing, and talking with other members of the research staff about his field experiences, and other responsibilities in connection with the project.

The small size of the school and its limited facilities influenced his activities during this early period. There was no place for him to establish "home base" -- i.e., where he could go to write notes, think, and hold informal talks. The old building had large (5' x 20') closets between each of the rooms; each had a window at one end, and most were converted into tiny rooms. One was used by the teacher aides and contained the telephone, the coffee pot, the mimeograph machine, work tables, and cabinets. The teachers came here for coffee and, therefore, it was not conducive to note writing or private talks. Another closet was used as the nurse's office. Still another was converted into a toilet for the early childhood program that was partially housed in the elementary school. After about a week he found one closet being used as a storeroom by the art teacher. She offered it to him for holding conversations and note writing. But it was converted shortly thereafter into a reading room.

In retrospect, this lack of space had, curiously enough, a positive effect on his behavior as he noted in his field work report:

> Since there was no place I could call my own, I was forced to move around from a closet to the office, then to the aides' room and again to a closet or the hall. This circumstance brought me into frequent contact with staff members and resulted in many interactions that would not have occurred if I had a place to stay and remain during those early "unsure" days. In short, I was forced to make "rounds" in the school and, therefore, came into frequent contact with the staff.
>
> The lack of an office, however, had negative as well as positive consequences for my field observations, especially with respect to recording them. Note-taking at first constituted a difficult problem. I felt very uncomfortable in bringing out a notebook and writing in process style what was happening during a conversation. This was because I felt that while writing I would be blocked from "hearing" certain things and also I would inhibit what might be said. I, therefore, decided to make it a practice not to write down things during these informal episodes but to record them later. But then I found that I sometimes failed to record information of importance because there was no place to go immediately afterwards and write down what had happened. I even tried going out to my car, but since the door to the school was locked I could not get back without ringing the bell each time. The problem was a difficult one.

The procedure adopted after about two weeks of these frustrating experiences, and one that was used consistently throughout the remaining field research, was as follows: first, to spend as much time as possible at the school observing and listening; second, to make mental notes of what seemed important for the study; third, jot down as soon as possible after these selected episodes key phrases and statements in a small notebook; four, to expand these notes at night with recollections of observations and conversations. The notes were eventually typed and filed according to date. Although this procedure probably resulted in missing some details, this appeared to be the most effective way to capture what had been observed or heard and to record activities and happenings of most relevance for the investigation. The same procedure was also used to record informal personal conversations. When it was not conspicuous, for example, at staff meetings, the field worker would write much more in process-style about relevant matters.

During the month of December and the first part of January, the major organizational change alluded to by the administrators in our early talks seemed extremely elusive. Most of the changes, none being tried by all teachers, seemed to be curricular in nature, all were "sprinkled" with the pronouncement that "children should have greater freedom in school." The one possible major change announced in late November was still in the "confused-talking" stage.

Phase II. The problem of specifying the particular change to be explored in this case ended during the middle of January. Shifts in the daily school routine were instigated by the administration in order to "encourage" teachers to make efforts to implement the major organizational innovation announced in November. As a result of informal observations and conversations, it seemed apparent that there were mixed feelings on the part of the teachers about this innovation. Moreover, it appeared that ambivalent or negative attitudes toward it, unless changed, might block the successful implementation of this major change. In order to check these observations and others in a systematic way, the observer was removed from the field for nearly a month between February 13 and March 13, 1967, primarily in order to develop a formal, longitudinal schedule for interviewing the teachers. During this month, short periods of time, however, were spent in the school to maintain communication and rapport.

Several central ideas were built into the construction of the teacher interview schedule (see Appendix A-1) as a result of the field experiences and discussions with the field worker. First, our impression was that teachers varied in their initial response patterns to the innovation because of their perceptions about the way the change had been announced, the nature of the innovation itself, or both circumstances. Second, teachers appeared to vary initially in the extent to which they had a clear understanding about the innovation and their responsibilities with respect to it. Third, they also appeared to hold different views about such matters as the priority assigned to it by school officials, its function, the need for it in the school, its value and workability, its advantages and disadvantages, and how others felt about these matters.

The field worker's observations also suggested that most teachers during their initial efforts to implement the major change were confronted with a number of problems that perplexed them and that occurred inside and outside of their classrooms. Moreover, they received little help in coping with these problems from those who were asking them to make the changes, their administrators.

We reasoned that unless these apparent obstacles to carrying out the innovation were recognized and effectively dealt with by the school administration, they would serve as major barriers to its implementation. The schedule was constructed to ascertain teachers' perceptions about these conditions and to measure possible shifts in their perceptions over time: when they first heard about the innovation, just before their first efforts to implement it, when they first tried to implement the proposed change, when they made subsequent efforts, and at the time that they were being interviewed. In short, the formal interview schedule, which contained several multiple-choice and many open-ended questions, was designed to secure from each teacher his perceptions about the events that transpired over a five-month period in connection with the innovation, whether his feelings and perceptions about it had changed during this period, and, if they had, why they had changed. One could argue that major drawbacks to asking people to be retrospective about their experiences are, first, it may be so far removed that poor memories about specifics lead to faulty reporting; second, intervening experiences may modify original perceptions without respondent awareness; third, the desire to be consistent may lead subjects consciously to distort their feelings.

It was felt, however, that the time lag was not sufficiently long to distort the teachers' memories about answers to the kinds of questions we were asking. In addition, we felt that by asking teachers to be retrospective about shifts in perceptions toward this innovation, such a perspective might sharpen the clarity of their actual reactions. Furthermore, we tried to allay any fears about inconsistency or failures of memory by acknowledging these as natural and by guaranteeing anonymity and confidentiality. Finally, it was hoped that the extent of rapport now clearly apparent between the researcher and most teachers would also help to encourage honesty; while there were several instances of intentional distortion, the kinds of responses most teachers gave reflected considerable candor and the recognition of the importance they saw in reporting this kind of information for research purposes.

Several drafts of sections of the schedule were written and revised for content and style during the last two weeks in February. A final first draft was completed and refined for pre-testing. After a series of pre-tests were conducted during the first two weeks of March with project members, several other colleagues, and a few teachers who had been involved in change situations at one time or another, revisions in style and content were made and incorporated into the schedule. The final schedule used was completed on March 15. It contained 73 basic questions, some having as many as ten parts.

The pre-tests made several things abundantly clear. First, the schedule would provide a systematic, comprehensive picture of each teacher's perception of the "change process" during this five-month period, what each teacher's basic reactions were to the innovation at different points in time, and why they had the feelings they did. Second, if teachers' responses were written down by the researcher rather than taped, the interview would last usually between three and four hours. However, the decision to write, as close to verbatim as possible, the subject's responses rather than taping them was based on the notions that the teachers would be less inhibited to speak freely, and that the chances of "losing the interview" because of poor reproduction or transcription problems would be avoided. Third, the interview would have to be broken into at least two or perhaps three or four parts because subject interest began to wane and interviewer writing fatigue set in after an hour or so.

The administration of the interview schedule was initiated on March 20 and was completed on April 13, 1967. All the elementary teachers were administered the full schedule while the early childhood teachers, the two remaining subject specialists, and most of the interns and student teachers were administered a modified form, since many of the questions pertained only to the regular elementary teachers. These additional interviews were to be used as supporting evidence. In all, 20 interviews were conducted.

During the week of March 13 the interviewer explained to each person to be interviewed why it was important to have a detailed, formal interview with them and also indicated that it would be necessary to have two or more sessions with them because of the length of the schedule. Two teachers engaged in good-natured joking about "being a CIA agent," and "what do you want, a life history?" Everyone willingly consented to cooperate. The interviews started on March 20 and were completed on April 13.

While aware of the importance of standardizing all the interview situations for the purpose of comparability, there were certain conditions which in this situation defied standardization: place of interview, time of interview, length of each session, and number of sessions. As noted, the school had no free room that could be used as a regular place for interviewing. In addition, teachers had only small chunks of free time available, before, during, and after school for interviewing; furthermore, not only did their free time overlap, but often when teachers were available, space was not. Scheduling of interviews was the major problem. After considering and dismissing a number of alternatives including using the nearby YMCA and employing several other interviewers, the decision was made to schedule the teachers first according to their schedules and then to find an available private place in the school. This worked extremely well under the circumstances.

The converted closet-reading room and the closet-nurse's room were favorite places. Occasionally the aides' room was used before school. When interviews were held after school either the aides' room or an empty classroom was used. The student teachers were all interviewed at the University after school in the afternoons. Interruptions at the school were minimal, as were cancellations.

The interview sessions were scheduled during periods teachers said they had free time, providing it allowed enough time to administer complete sections. Most of the regular teachers completed the interview schedule in four sessions of about 45 minutes apiece. Some teachers required five sessions; others only three. No regular teacher completed the interview in less than three sittings. Because the schedule was somewhat shortened for the student teachers, three sessions were usually sufficient; a few did it in two. No session was scheduled for less than half an hour while some lasted nearly an hour and a half.

To develop and maintain rapport with the respondents and to make the interviews as objective as possible, the following procedures were used. During the first session with each subject the interviewer opened with a set of standard introductory remarks designed to indicate the importance and purpose of the interview, to give assurance of anonymity and confidentiality of the interview, and to establish a warm atmosphere for conducting the questioning (see Appendix A-1, Introduction to the Interview Schedule). The time chart was then explained and placed in front of the subject and referred to often during the session to specify the period of time under discussion. In later interview sessions the investigator began with (1) remarks about the guarantee of anonymity and of confidentiality, (2) a brief review about their previous discussions, and (3) a reference, using the time chart, to the period on which questions were going to be focused. The questions were asked in a straightforward, neutral manner and each subject's answers were recorded in near entirety to minimize possible interviewer bias created by response selectivity. More detailed answers were probed for when this procedure appeared to be appropriate, but not when the investigator felt the respondent would be resistant to this procedure. Information not directly related to a question was recorded in the margin or on the back of the page of the schedule. When possible the investigator faced the subject, so that he could look at him directly to ask questions, and so that the subject would feel less temptation to attempt to read what was being written.

Most teachers apparently felt at ease during the interviews. They responded to many questions in a manner that could have been damaging to them if they had not been convinced of the confidentiality of the interviews. There was little resistance to additional interviews. These conditions suggest that this aspect of the data collection was well received by the teachers. This conclusion is buttressed by the fact that a number of them voluntarily remarked that the interview served as a "soul searcher" or "a way of getting things off our chests," or "I enjoyed talking with you." One teacher, however, did say she felt that she was being asked the same questions over and over! No teachers were overheard discussing the contents of the interview. Some joked about its length.

Phase III. The final phase of data collection placed stress on systematic classroom observations, and it began on April 24 and ended on May 12 (see Appendix A-2 for the Observation Schedule). During this period the field worker spent every day at the school full time except for the afternoons of May 2 and May 3. The rationale and procedures used in the systematic observations to determine the degree of actual implementation of the major organizational innovation at that time will be presented later in the report.

The teaching staff was also asked during this phase to complete a two-part battery: a personality inventory (Edwards Personal Preference Schedule*), and nearly fifty items measuring background characteristics, aspects of career aspiration, and job satisfaction (see Appendix A-3). In order to standardize the conditions under which teachers would answer the questionnaires, they were invited to lunch on May 3, 1967, and in the afternoon completed the questionnaires in a group session. After lunch we thanked them for coming, for their cooperation, and explained the relevance of this kind of information for the study.

Most staff members took about an hour and a half to complete the questionnaires. After they had finished and were gathered in the hall, some teachers expressed mild resistance to the Edwards Schedule which consists of 225 pairs of forced-choice statements about personal preferences. We were aware that this might happen because similar complaints were raised by two of the five people who were used in a pre-test of the questionnaires the week before.

As in the case of those pre-tested, the teachers who objected felt that the Edwards forced them to make often "difficult," "unrealistic," and sometimes "ridiculous" choices. The pairs they felt to be especially ridiculous involved items designed to measure heterosexuality, one of the fifteen personality variables the Schedule purports to measure in addition to achievement, deference, order, exhibition, autonomy, affiliation, intraception, succorance, dominance, abasement, nurturance, change, endurance, and aggression. One teacher was so disturbed about this instrument that he refused to talk to the field worker at school for several days. Another failed to complete the job satisfaction part of the questionnaire, perhaps because of negative feelings about the Edwards Schedule. However, most of the staff did not complain at all, and several even voiced feelings of pleasure about the challenge of the Schedule.

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*See Buros (1965) for a discussion of the validity and reliability of the Edward Personal Preference Schedule.

During this phase of the study, in addition to the systematic observations of the classrooms and the self-administered questionnaires, collecting information from daily observations and informal talks at the school and from documents continued. The final day of our field work activities was May 12, 1967.

On May 18, 1967 the members of the project held a private afternoon conference with the Director of the Bureau of Educational Change to present him with a tentative analysis of the findings of the study, and to offer him a series of tentative recommendations based on them. The Director welcomed this opportunity to discuss the outcome of our study and appeared to be interested in our recommendations.

In order to comply with the original agreements about anonymity and confidentiality to the respondents, several precautions have been taken in the preparation of this monograph. All names including those of the school system, the school, the change, and the participants have been masked. Responses of teachers that might readily be identified have been pooled to further obscure their sources. Also, when references in magazines and newspapers which reveal true identities are used as evidence, they are referred to in general terms; specific references are not cited.

Summary

This chapter reviewed the research methods used in this investigation of the problem of implementing major organizational innovations in schools. After discussing advantages and disadvantages of using the single case study method, the research strategy employed in this investigation, and how the school was selected, we then examined in detail the major problems faced in conducting the study and how we attempted to overcome them. They were discussed under the following headings: securing administrative permission to do the case study, gaining entrance into the school, defining the role of the researcher, establishing rapport with the staff, and collecting the data.

Chapter 4

THE CLIMATE FOR EDUCATIONAL CHANGE

We noted in Chapter Two that several students of organizational change have suggested that circumstances existing in the internal and external environment of an organization prior to the time at which it attempts to introduce an innovation into its operation will have an important bearing on the degree to which the innovation will be successfully implemented. In this chapter we examine whether a number of such conditions were present in the internal and external environment of Cambire prior to or at the outset of the introduction of the major innovation into the school.

Conditions External to the School

The Need and Community Pressure for Educational Change

The Cambire School is located in the central city of an eastern metropolitan area of the United States that contains a number of affluent suburbs. Like other urban complexes, this region has been confronted with serious financial, housing, and transportation problems. Moreover, a number of its major social and economic problems are in part attributable to ethnic and racial antagonisms and the flight of the white middle class from, and the migration of predominantly lower-class southern Negroes to, its central city.

The Cambire School is located in a district of the central city where the rates of in- and out-migration are extremely high. This once all white district where 60,000 residents currently live is now nearly 60% Negro. In 1967 it had the highest incidence of welfare and Aid to Dependent Children cases of all districts in the city. The area is also characterized by very high rates of criminal arrest, of unemployment, and of school dropouts compared to other sections of the city.*

Since the early Sixties, politically-active Negro citizens in this district had been centrally involved in the Civil Rights Movement and had pressured for improved conditions in housing, jobs, and social welfare. They also had expended great effort in attempts to obtain new schools and to improve the quality of education for their children in existing schools. They criticized the Board of Education and its administrators on many grounds: their failure to take steps to improve the average achievement test scores of students in the system which were below national norms, their lack of concern about the small percentage of students who went on to college, and the slow pace of the school building program. They also had been upset by the failure of their school system to introduce educational innovations found in surrounding suburbs and in other cities. A number of Negro leaders had chastised the School Board for its unwillingness to deal with, or even recognize, de facto segregation in its system and some had contended that arguments about school integration and bussing only served to take attention away from the severe educational shortcomings of the system as a whole. Through such activities as picketing and public confrontations with school officials, they had been persistent in their clamor for school reform.

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* Taken from official city statistics.

The Response of the School System: Commitment to Educational Change

In 1965, the School Board and Superintendent publicly recognized, and expressed a willingness to attempt to deal more effectively with, the problem of educating lower-class children as well as of improving the learning of all students. In a joint statement they outlined plans to use the Title I and III funds available to them through the Elementary and Secondary Educational Act for these ends:

> The basic problem and the basic challenge of education is the continued revitalization of the entire educational process -- not only new school buildings and new sources of funds but a whole new look at what goes on in our schools and a full-scale attempt to produce new and better ways for teachers to teach and children to learn. . . For the first time in many years sufficient funds are available to begin a major attack on the problems of education in a large urban center. . .we intend to take full advantage of this unparalleled opportunity. We feel that the immediate problem divides itself into two quite complementary parts. The first of these is a concentrated assault on the problems of education for the most disadvantaged children of the city, both Negro and white. This is largely a matter of doing the very best job that funds and the state of our present knowledge permit. The second part of the problem is the task of learning how to do the job better. For this part of the problem nothing less than a major commitment to innovation will do. We intend that the primary emphasis of our innovative efforts will again be on the educational problems of disadvantaged children, for it is here that the problems are most pressing and our knowledge the least secure. We feel also, however, that our answers to the problems of the disadvantaged will lead us quite rapidly to many educational innovations that are applicable to all. . .children. We thus intend that the commitment to innovation be a general

> commitment to the improvement of education for all. . .*

The commitment of the top school officials to change is underscored in the same document which reported that the large grant of federal money which the school system was awarded would be used to establish and develop two new departments, one of which was designed to promote innovation in the system:

> We have established within the school system two new agencies which will be directly responsible for enriched education and innovation. These are the Department of Compensatory Education, which has the operational responsibility for the enriched programs for disadvantaged children, and the Bureau of Educational Change, which holds the primary responsibility for overall planning and for the operation of innovative programs in the system. . . . We feel that these two departments will together be able to mount a concentrated and innovative attack on the problems of education of disadvantaged children and thus take a large first step in the continuing process of revitalizing [our] schools.

The Bureau and the Cambire School: An Internal Pressure for Change

The Bureau (BEC) was charged with the responsibility of developing and administering laboratory schools that would focus on improved means of educating children, primarily "disadvantaged students," from preschool through high school. These schools were assigned the task of developing and testing new programs and materials that then could be diffused to other schools in the system. They were also expected to serve as training centers for both teachers and administrators:

> In order to begin and carry on a large-scale program of educational innovation in the education of disadvantaged children, we are in the process of establishing a number of laboratory

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* Taken from a school memorandum.

> schools in which promising existing programs can be explored and in which new programs can be developed. . .[they] will also serve as a training ground for teachers and administrators so that successfully tested programs can be spread to other schools when adapted for use in differing educational situations. . . . Located in an area representing the most pressing social, economic, and educational problems. . . ., an integral part of the school system. . . [they] will be designed and administered by the Bureau of Educational Change in cooperation with community agencies and people in the disadvantaged areas.*

The personnel of the Laboratory Schools included a central staff and field staffs of varying size for early childhood, elementary, junior high, and senior high levels. The central staff was headed by the Director of the Bureau, Mark Williams, who was directly responsible to the Superintendent's office. The Director's central office staff included a coordinator of innovative programs, a program analyst, and a research specialist for measurement and evaluation of the schools, an office manager, and several secretaries. The central staff, physically separated from the field staffs, was located in an old building in the district and the junior high and high school staff were both located in the same school. Cambire housed the elementary staff and a small part of the early childhood staff. The remainder of the early childhood staff was located in another elementary school building. Each field staff was directed by an assistant directly responsible to the Director of the Bureau. At the time the study was initiated, Cambire School was the only laboratory school operating on a full-time basis.

The part the Director played in creating the Bureau and the Laboratory Schools and the rationale for their development were described in his own words as follows:

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*Taken from a school document.

> I. . .talked in early 1965 to the superintendent. . .he had been elected on what to a lot of people in the city looked like a reform platform; he had a lot of ideas about recruiting teachers outside the area and opening up the school system to outside influences. . .he proceeded to describe his difficulties in getting change going in the school system. . . it became clear to me and subsequently to him that one reason he was in such difficulty was, as he said, because he simply had no mechanism in his system for coping with change; he knew that there were changes coming, he knew that the system had to change but he was uncertain about how to go about it; and he was on top of a system that simply had no way to change, and certainly no way of coping with any kind of radical change. . .but he did want to introduce some changes and he was having a deuce of a time figuring out how to do it . . . I said to him that he needed to create a mechanism, an office for research and development and particularly to set up a sub-system for experimentation. . .the order finally was generated to plan for a grant, so I left my position and came in to work full time on it, and getting this office set up. . . what we [I] did was to determine what a sub-system, an office of research and development might be. . .the Bureau of Educational Change was created. . .we developed a proposal which said that about 20% or about $800,000.00 of Title I should be put into R and D, and into the support of the Bureau and laboratory schools. . .the general plan was that the office would work directly under the Superintendent and be responsible directly to him. . .this began to change a little as things went on and we were nominally put under the control of the Associate Superintendent in charge of curriculum and the improvement of instruction, but to all intents and purposes we did work and still continue to work directly under the Superintendent. . .now the purpose of this laboratory school part was to come up with new ways of doing things, to experiment with new curriculum materials, new ways of organizing classrooms, new ways of organizing teachers, we had a pretty broad mandate. . .the lines of authority run from the school to the Bureau and on up, so that we're in charge of the school. . . .

The Director of the Bureau: An Outside Change Agent

The Director of the Bureau has been characterized as "a crew-cut, tall outsider in a system administered by civil servants who came up through the ranks" and a "former jorunalist who has been associated with an independent, curriculum development firm, and a well-known foundation working on school architecture and equipment."* Many educators believed that he had been instrumental in helping the school system obtain federal funds and in introducing new ideas and curriculum materials into the schools. However, some Negro parents viewed him and the Bureau as a deterrent to fundamental educational change because they wanted an immediate major overhaul of the system; furthermore, a group of militant liberal whites considered Mark Williams as "a patsy" for the system because of his willingness to work with officials whom they believed had shown little interest in educational innovations in the past.**

Mark Williams' views about the need for major change and many of the problems of educational reform are reflected in an excerpt from an article he wrote about new curricula prior to his appointment as BEC chief:

> Evaluation, teacher recruitment and training, the continuing development of new programs, further research into how people learn, all of these enormously important tasks depend upon the creation of a viable and permanent system of educational research and development that is an integral part of the larger American educational system. The current wave of reform is not the first that has hit American education. The deplorable history seems to be a burst of reform followed by twenty-five years of stagnation followed by another go at bringing things up to date. This is an exceedingly wasteful process. . . . Whatever particular solutions are eventually arrived at, they will in the final analysis be largely a matter of American education facing up to what may be the distinguishing characteristic of our age.

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* Taken from a magazine article.

** Taken from a newspaper article.

In summary, a number of external conditions that could be presumed to be conducive to change in the Cambire School were present prior to the introduction of the new role model for teachers. These included a positive orientation to change on the part of both parents and top school officials, their recognition of the need for upgrading the performance of the schools, and the employment by the higher administration of an outside change agent whose responsibilities included the establishment of a set of Laboratory Schools of which Cambire was a part.

Conditions Internal To The School

In examining conditions internal to the school, we first shall inquire whether at the point of announcement of the major organizational innovation, the school had previously been exposed to innovative efforts. This also provides a convenient way to introduce the reader to the history of the school and the extent to which it had attempted to respond to the need and pressure for change from its external environment. We then shall consider other circumstances which might influence the extent to which teachers would be predisposed to implement innovations: characteristics of the teaching staff, the financial and personnel resources available to the school, and the extent to which the "educational atmosphere" at the school at the time of the announcement was conducive to change.

A Period of Traditionalism

Cambire was built at the turn of the century, and for nearly forty years, as an elderly teacher who was a pupil at the school noted, "served almost exclusively a Jewish neighborhood." However, by the late Forties the residents in its school neighborhood were nearly all lower-class Negroes as a result of in- and out-migrations. A very stable staff taught the Negro pupils during the Fifties and early Sixties. The school was traditionally organized, that is, it was a tightly controlled, graded school with self-contained classrooms in which the children were completely teacher-directed, and it used a standard curriculum specified by the higher administration for all the elementary schools in the system. The principal at Cambire at that time recalled what the school was like:

> Community-school-home relations were excellent, we had a great deal of contact with the home between 1950 and 1962. . .I've always felt that children need forms of excellence. We have to direct them in their appearance and expectations, how they look, talk, act. We can't allow the children to run the school nor degenerate it. We are judged according to these things. . . .

In further describing her school, she stated:

> Excellent work was being done here during these years, but without all this 'ballyhoo!' . . .I also had strong rapport with the community! [taking out of her desk drawer, as she said this, several letters which she kept as examples of positive correspondence] . . .We had a newsletter to parents and the Community Council was involved in our activities to a great extent. . . .

She showed the interviewer a folder she had kept on the reading scores of children in the school at that time and exclaimed, "They were learning how to read very well under the old system!" He could not follow the more than ten pages of lines and graphs and numbers she had in handwritten form. However, she attempted to make clear her belief in the traditional approach to education and in her own effectiveness in using it at Cambire.

In an unwavering tone, she continued:

> Teachers as far as I am convinced have a responsibility to teach civic and moral virtues. . .Between 1950 and 1960 we had almost no teacher turnover, we had a stable faculty, most had their master's degrees and at least five years' experience. . .I felt that there was a team, teachers knew parents, it was a real neighborhood school. We had self-contained classrooms with special emphasis on needs of the children, [giving the example that fourth graders would help third graders do tables of multiplication]. We used filmstrips, opaque projectors, went on bus rides to airports, aquariums, took train rides. We had field trips for all grades [K-4, 200 children] to the pond and several museums. . .we used these trips as tools for citizenship, put great stress on manners in addition to the learning of the academic materials. . .a lot of people think that this stuff isn't important anymore, I don't think they are right. . . .

An interview with the Cambire custodian who had worked there for the last twelve years also provided evidence about the school's traditional orientation prior to 1965. It revealed his approval of the previous principal and his reservations about the newly established programs. When he was asked, "What was it like around here when the previous principal was in charge?" he responded with strong feelings, and at first in a low, hushed tone:

> Oh, when Sally Jones was principal you could hear a pin drop, she came in every morning exactly at the same time. I could hear her footsteps to her room. . .She knew when a kid was coming down or going up those stairs, she knew where every kid was going to and coming from. . .she was strict but very fair! [Then with real satisfaction] she really made those kids toe the line, and they learned! Kids never talked back, the teachers all of 'em were here for a long time and knew what they were doing and she saw to it that the shades had to be

> drawn exactly so, if they weren't she'd let you know about it, oh she was a wonderful principal. . .classes were quiet, orderly, teachers made sure of that. . .now [disgustedly] kids running around, the place is like a pigpen. They talk back, but this is none of my business, I just do my work. [Then, as if he had not said this, he continued] they run up and down the stairs, I don't know, I don't think this is good, all these new ideas like those Ca. . .Ces. . ., [he tried to say Cuisenaire Rods, I helped him say it]. . . what can you do, things change. . .since she left everything has been in an uproar. . . .

His interview also indicated the great turnover in staff that had occurred after the previous principal's departure as well as a much publicized conflict with parents. He put it this way:

> Miss Jones was here for a long time, nearly 14 years, there wasn't any turnover in staff. . .then when she left, in about [hesitatingly] September of 1963, Mrs. Smith took over as acting vice principal. . .she's at the Fields School now. . . then Mrs. Zingal came in and finally Mr. Jackson took over. That was the year the building was determined unsafe by the parents, when the school was put into another district and the parents fought it. That was when the YMCA was being built. . .by then all the teachers who worked for Sally left. . . .

A Period of Upheaval and Transition

A perusal of the yearly staff lists and curriculum guides for Cambire during the years between Sally Jones' departure and the take over by the Bureau of Educational Change (1962-1965) supports the custodian's contention that there was a complete turnover in staff. By 1965 no one remained who was there in 1962. During the 1965-66 academic year the number of pupils attending the school had dwindled to less than a third of its previous enrollment due to a conflict between parents and the School Board over the switching of district lines and the safety of the building. The available evidence also indicates that the traditional pattern of school organization was still in operation. The Director summarized the conditions at the school when the Bureau took it over and the attitudes of parents toward it at that time:

> It's a very small school, obviously, and very old. It was I think built in 1875; it's a typical sort of Quincy, graded school, not in very good shape. We got it because nobody else wanted it! And nobody else wanted it for some very good reasons. . .the new YMCA was being built next door, the parents of the kids in the school got very disturbed not only because they were disturbed in general about the city's schools but in particular because they thought it was very unsafe to send children to school through all the bulldozers and construction work; so they sued the city to have Cambire declared an unsafe school; they lost in the courts, so a large number of them took their kids out and voluntarily bussed them out to another school. . .when we arrived on the scene, Cambire which has a normal capacity for about 200 had about somewhere between 70 to 90 kids in it with a full complement of teachers. . .every time it got back in the newspapers one district would drop it and send it over to somebody else's district. It was a school really that nobody wanted very desperately. . .it was sort of given to us. . . .

Cambire as an Experimental School: September 1965 - June 1966

Considerable parental resistance was encountered when it was announced that Cambire was to become a Laboratory School; however, it subsided later. The shift in parent attitudes is indicated by two stories in the same newspaper in 1965 and 1967.

In 1965:

> Negro parents have. . .challenged the choice of the Cambire a condemned building, as the site for a laboratory school, calling it a 'negative symbol to the Negro community' and a 'conscious insult.'

In 1967:

> It was only three years ago that the old Cambire School. . . stood for neglect and deprivation. . .Today the Cambire is

> visited constantly by university educators, praised by a federal senator, and beseiged by parents who hope their children can get in. Outwardly, nothing much has changed. It still looks its age, 67, and the enrollment is still 99 per cent nonwhite. . . .

While the basic classroom arrangement and curriculum were the same before and immediately after the take over by the Bureau, a number of efforts to introduce or stimulate innovations were initiated in 1965.

One was the introduction of a program that utilized volunteers who had expressed a desire to work in an innovative school with children. A second focused on the creation of new positions within the administrative structure and staff of the school. At the beginning of the year the position of Assistant Principal was abolished and an Assistant Principal, Loretta James, was selected to be Administrative Director of the school. The Assistant Principal at that time, Phil Jackson, was made Assistant to the Administrative Director. In the middle of the year the position of Instructional Director was filled, and its incumbent, Rudy Gault, was formally given the responsibility for planning and directing instructional experimentation of the school. The position was equal in formal status to that of the Administrative Director.

During this latter part of the year a third effort to stimulate new programs and curricula was initiated. Several specialists were assigned to the school on a full-time basis. Their responsibilities included investigating and developing promising educational innovations, working with teachers in developing new programs, and helping teachers to utilize new materials and procedures in the classroom. They were directly responsible to the Instructional Director. The instructional staff, consisting at the beginning of the year of teachers already assigned by the personnel office and others selected by BEC, was also supplemented at this time.

The school experimented with a number of new programs. These included game learning experiments developed by ABT Associates of Cambridge, Massachusetts; Eurythmics conducted by a member of a Conservatory of Music; a music program involving lessons in vocal, instrumental, and choral music; the Young People's Museum's Match Box Project (a program of study about birds, the city, Indians, seeds, and Greece); a university reading program, based on the integrated linguistics approach that utilized speech, sight, and sound to reinforce vocabulary, was taught by a university professor; a teacher-training program involving four university graduate students who observed and taught one day a week; a teacher-aide program involving students from several nearby colleges and universities. In addition, a number of new types of materials (including modular blocks, clay, sand tables, pebbles, shells, sand, sawdust, room dividers, floor-based blackboards) were made available to teachers.

The Bureau opened the school in the afternoons to a special tutoring program sponsored by the local community council for Cambire children as well as children from other schools. During this school year it also asked the parents of the school to form their own independent parent-community group. By the end of the year the population of the school rose to 190, near to its full capacity.

The Summer of 1966

The summer school conducted at Cambire lasted from the final week of June through the end of July. A large majority of the staff who were on the faculty at the end of the school year and a large number of educators from a nearby university participated in the program.

Its major intent, according to the Director of the Bureau, was to develop curricula and programs for the school for the Fall. The plan was to retain the traditional subjects but to teach them in new ways and it was hoped that the summer school operation would suggest how this might be done. Staff members from the university had particular projects they wished to explore; for example, one group wanted to compare the "in-school" language used by students, teachers, and texts, to the language used by the student and those with whom he conversed outside of school. It hoped to identify language problems that the student brings to the classroom and language difficulties created in school and to examine the implications of their findings for language theories. Another staff member was concerned with new curricular experiences, for example, involving students in preparing and submitting recommendations to public water agencies, teaching literature to elementary school children through the writing of their own one-act plays, and taking trips to various parts of the city.

The interviews and private documents revealed, however, that conflict arose between University staff members and the school's personnel during the summer school at Cambire. Much of the controversy centered on whether the school or the University was to decide what activities were to be undertaken. For example, the Instructional Director had spent a great deal of time and energy developing a unit on the airplane that was designed to teach reading, math, social studies, in an interesting way. The school proposed to experiment with this unit during the summer. This idea, however, was rejected by the University personnel who wanted, as noted, to work on small independent projects. In the Director's words:

> . . .the summer of 1966. . .really consisted of a bunch of interested University people coming in and working with the staff at the Cambire. . .working more or less as equals with the staff. . .and that was quite a fascinating summer. It started off very rocky with both sides quite misunderstanding the other much of the time. Although it was supposed to have been spent in developing curriculum materials for the coming year, most of the time was spent bickering. The school people felt imposed upon. Their attitude was 'who the hell are these people who don't know anything about urban schools coming in and trying to tell us what to do?' and the University people felt fairly frustrated by these old liners. . .By the end of the summer there were some very interesting things going on in the classrooms; we took awhile for communication to be established. . . .

In describing the summer program, a member of the University group said:

> Rudy had been planning during the Spring of 1966 a summer program around the theme of flying. Everything would be taught during the summer program around this theme of planes including reading, math, science, the whole bit. It was carefully planned and then when the University people. . .arrived for the summer it was presented to them. Well, there weren't any negotiations even, the University people said flatly, 'No!' We have a lot of different things we want to try and this would mean we couldn't do them. Mark, on the other hand, was

> so interested in getting outsiders involved in the system that even if he thought Rudy's idea a good one, he wouldn't have supported it; besides, it was much too directive; and since it wasn't acceptable to the outsiders, the upshot of this whole thing was that Rudy lost, the program and all the planning went into the trash can. . . .

Even though the summer session did not end on a very positive note, the fact that the school staff was involved in and exposed to new ideas introduced from outside, undoubtedly helped maintain, or even perhaps increased, the climate of change and experimentation which was initiated earlier in the year.

Cambire in the Fall, 1966: An Intensification of the Change Atmosphere

When school resumed in the Fall several events led to changes in the administrative hierarchy and personnel. The Administrative Director had resigned to take a principalship in another school and the administrative assistant was placed temporarily* in a supervisory position in the larger system. The two positions were then abolished.

The Instructional Director, Rudy Gault, was made Assistant Director to Mark Williams and was put in charge of the school. While Rudy was responsible for managing curriculum development, personnel supervision, program implementation, and the administration of the school, decisions concerning curriculum design and school operation were Williams' responsibility. In his words in a progress report submitted to the Superintendent's office in July of 1966: "The school will be under the immediate supervision of the

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*He did not return that year.

Assistant Director, elementary, who will in turn, be directly responsible to the Director of the Bureau of Educational Change." Rudy, a former science teacher, had spent the most recent part of his 15 years in the system as an ssistant rincipal. During this period he also earned a master's degree and another professional degree. He was working on his doctorate in 1966.

Three subject specialists, in Language Arts (John Helman), Math and Science (Alex Wiley), and Social Studies (Stuart Franklin), were assigned full-time to the school. All three had been there part of the previous year and during the summer. According to one document, they were to "report to, and confer with, the Assistant Director in the determination and implementation of educational policy and also conduct classes and function in cooperation with the classroom teachers." All three were seasoned teachers; John, in addition, had considerable administrative experience and had been involved with an earlier, minor educational change effort in the school system. For the 175 elementary level children there were 11 full-time teachers in the Fall, only three of whom were present at the school during the 1965-66 academic year. The remaining eight were new to the school.

Cambire at the End of October 1966

The Physical Setting: The school was located in a neighborhood that was part of a large urban renewal project. The area consisted of three-decker housing, remnants of the district's earlier wealth, newly constructed low income, duplex housing, and open torn down areas; nearby, stood a new shopping center; old dilapidated houses and small shops facing one of the main roads running through this district were also visible. The school, only a few feet from the sidewalk of the street, had several small, asphalted play areas for children. Just north of this area was a large, enclosed, grassy ball field used by the children for baseball and soccer. The contrasts of the new to old, and of the crowded to the sprawling, presented a picture of an area in transition.

In 1962 when school building experts from a local university assessed all school structures in the city they recommended that the Cambire School "should be abandoned for school purposes in the next few years." Of red brick exterior, the two-and-a-half story building had a total of eight classrooms, one on the first floor being used by the early childhood program. Each room contained about 800 square feet of floor space. The rows of former bolted down desks and seats had been replaced with new furniture, including moveable desks, chairs, and work tables. In addition, each room contained storage cabinets, moveable bookcases, and new equipment such as microscopes, typewriters, a telephone, and a variety of curriculum materials. Although each room had four or five large windows the lighting for reading purposes was not adequate. As noted earlier, many of the large closets attached to the classrooms had been converted to additional small rooms. The school contained no gym or auditorium. The building's interior walls, inside and outside the classrooms, were cracked, water damaged, and discolored. Dark varnished woodwork and half dark walls against light cream ceilings and half cream walls created "an uncomfortable" contrast. The hard wooden floors were dark with age as was the dark composition floor of the basement. The basement contained the boys' and girls' bathrooms and an area, once used for "exercise classes," had been converted into a part-time classroom. The custodian's office was also in the basement. The physical building presented a curious blend of the new and the old.

Characteristics of the Teaching Staff: Although there is a paucity of empirical findings on the extent to which the social, educational, and personality characteristics of teaching staffs influence the degree to which they will implement organizational innovations, a number of attributes of teachers might reasonably be assumed to have a bearing on behavior of this kind. For example, it could be argued that a relatively young, newly-employed, and well-educated staff would be more disposed to accepting a change proposal than an old, well-entrenched, and poorly-educated one. It could be maintained that a staff containing teachers who have strong basic needs for achievement and change might be more congenial to the acceptance and implementation of innovations than one with teachers who do not possess these characteristics.

Information about the 1966-67 staff's social, educational, professional, and psychological characteristics is summarized in Tables 4-1, 4-2, 4-3, and 4-4. Seven of the staff members were female; the majority were under 40 years of age. Most teachers came from middle to middle-lower class urban backgrounds; over half of the teachers were married. Most staff members had attended public elementary and secondary schools and private undergraduate colleges. All had earned at least the bachelor's degree and most either possessed a higher degree, were working toward one, or expressed a willingness to earn one. Seven of the 11 teachers had been teachers for less than five years; most had not been employed in the school system for over four years and had taught in no more than two of its schools. Eight of the 11 teachers at Cambire joined the staff in the Fall of 1966, two sometime during the 1965-66 year, and one in 1964. The interviews with the teachers revealed that all of them came to the school willingly, knowing it was to be "experimental"; several however, had not been interviewed by the staff of the Bureau but had been sent to the Cambire School by the central office, since there were several openings at the beginning of the semester but no volunteers to fill these vacancies.

A comparison of the staff and college graduates on personality tendencies* reveals some interesting findings. The majority of the teachers were above the 50th percentile on each of the following "needs": achievement (8/11), deference (9/11), order (8/11), endurance (9/11), and change (7/11), while falling below the 50th percentile on exhibitionism (9/11), affiliation (7/11), and dominance (8/11). The teachers were normally distributed on the need

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*Because of the general problem of measuring accurately personality characteristics the data presented in Table 4-4 must be taken only as suggestive.

Table 4-1. Percentages and Frequency Distributions of Selected Social Characteristics of the Teaching Staff (N = 11)

Social Variables	Categories	N	%
1. Sex	Male	4	36.3
	Female	7	63.7
2. Age	20-29	6	54.4
	30-40	2	18.2
	41+	3	27.4
3. Marital Status	Single	4	36.3
	Married	6	54.6
	Other	1	9.1
4. Present Income	-4,999	1	9.1
	5,000-7,499	6	54.6
	7,500-9,999	3	27.2
	10,000+	1	9.1
5. Father's Occupational Level*	White collar	8	72.8
	Blue collar	3	27.2
6. Father's Educational Level	College	5	45.5
	Graduate from high school	1	9.1
	Some high school	3	27.2
	Less than high school	2	18.2
7. Mother's Educational Level	College	3	27.2
	Graduate from high school	4	36.4
	Some high school	2	18.2
	Less than high school	2	27.2
8. Where Major Part of Youth Spent	Farm	1	9.1
	Town	1	9.1
	Small city	2	18.1
	City	7	63.7

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*White collar = education; other professional or scientific; managerial, executive, or proprietor of large business; small business owner or manager; farm owner or renter; clerical or sales.
Blue collar = skilled worker or foreman; semi-skilled worker, unskilled worker or farm laborer.

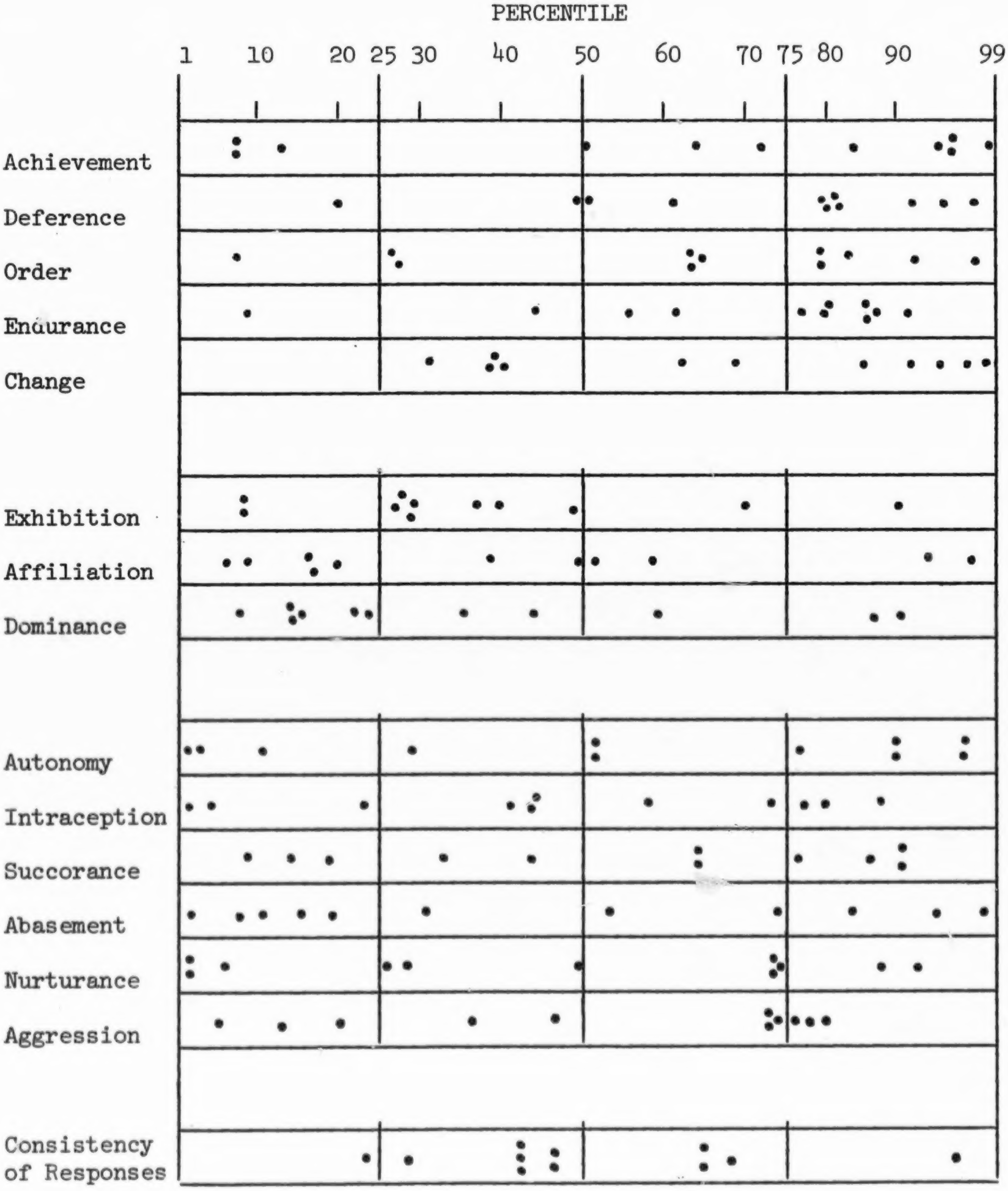
Table 4-2. Percentages and Frequency Distributions of Educational Background Characteristics of the Teaching Staff (N = 11)

Characteristics	Categories	N	%
1. Kind of Elementary Education	Public	7	63.8
	Parochial	2	18.1
	Private	2	18.1
2. Kind of Secondary Education	Public	8	72.8
	Parochial	1	9.1
	Private	2	18.2
3. Undergraduate Work	Public College (University)	4	36.3
	Private College (University)	7	63.7
4. Graduate Work	State Teacher's College	6	54.4
	Private College (University)	2	18.2
	Not yet begun	3	27.4
5. Highest Degree	-Bachelor	0	-
	Bachelor	7	63.7
	Master	2	18.1
	Master +	1	9.1
	Doctorate	0	-
	Professional	1	9.1
6. Self-estimate of College Work	Honors	0	-
	Above average	5	45.5
	Average	6	54.5
	Somewhat below average	0	-
7. Future Education Plans	No plans	1	9.1
	Take courses but not towards a degree	2	18.2
	Study for a master's	5	45.5
	Study for a doctorate	3	27.2

Table 4-3. Percentages and Frequency Distributions of Professional Experience Characteristics of the Teaching Staff (N = 11)

Characteristics	Categories	N	%
1. Years as a Teacher	1 - 2 years	3	27.3
	3 - 4 years	4	36.3
	5 -10 years	1	9.1
	11 or more	3	27.3
2. Years in This School System	1 - 2 years	5	45.5
	3 - 4 years	4	36.3
	5 -10 years	1	9.1
	11 or more	1	9.1
3. Number of Schools in This System Taught in	1 school	4	36.4
	2 schools	4	36.4
	3 schools	1	9.1
	4 or more	2	18.1
4. Years in This School	1 year	8	72.8
	2 years	2	18.1
	3 years	1	9.1
	4 or more	0	-

Table 4-4. Frequency Distributions Of The Teaching Staff On 14 Personality Dimensions* (N=11)



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* As measured by the Edwards Personal Preference Schedule, which used college graduates as the norm group. Each dot represents a teacher's score on a particular need dimension.

for autonomy, intraception, succorance, abasement, nurturance, and aggression. Most fell around or above the 50th percentile on consistency of response (9/11). It could be argued that these data suggest that the personality characteristics of members of the teaching staff would not serve as obstacles to their general receptivity to change. Their relatively strong need for achievement, deference, order, endurance, and change, and their relatively low need for exhibition, affiliation, and dominance, and their normal tendencies with respect to the other needs appear to be compatible with such a position.

We interpret the data contained in these Tables as suggesting that the staff in general did not have educational, social, professional, or personality characteristics that would mitigate or block their willingness to implement educational innovations.

The Atmosphere at the School Prior to the Announcement: There are a number of indicators which suggest that the atmosphere at the school preceding staff awareness of the major innovation in November was one which encouraged change. Williams, in discussing the general problem of changing a total system, touched upon the expectation for change at Cambire. In his words: "The general problem that faces all of us is how do you run a school system where change is the rule rather than the exception. . .Cambire is a kind of a model of this in that the pressure there is for change rather than standing still, and you're criticized if you don't change rather than if you do. . . ." A teacher at Cambire during the 1966-67 year later noted sardonically, "there you had to do new things even if they didn't amount to anything good, just so long as they weren't what you were used to." A formal declaration of the philosophy at the school in the Fall of 1966 also reflects this expectation:

> The elementary school must always strive to keep pace with changing times. To meet the unpredictable situations of a rapidly changing society, the modern school must prepare children for the future through process-centered instruction. . . .The child must be the focal point of the education process. Teachers should be expected to collaborate and confer with ample time allotted for planning. New materials, new content, and new techniques should be continuously explored and rethinking, based upon an evaluation effort, should become the essence of our teaching efforts. Inherent in the 'innovation' is a spirit of creativeness and inventiveness. . . .

Various conditions at the school served to support this climate of change. First, the school was marked by a great deal of informality. Most staff members and administrators were on a first-name basis. Teachers seemed to enjoy relaxed, interpersonal relationships with each other as well as with the children and parents. Unlike other schools in the area, the children were allowed to do a great deal of talking in the halls between classes, during lunch, and even during classes, and parents were invited to visit the school at any time. Second, the teachers were granted freedom to try new curricula, teaching methods, and to treat children in a more egalitarian way. Third, a number of the teachers noted that the additional $1500, which they received for staying late two afternoons each week for meetings and for working part of the summer, was an additional positive inducement to them to try new approaches. Finally, Mark Williams' estimate that the average per pupil expenditure at Cambire was $1500 for the year reflected the extent to which financial resources were available to support the climate for change.

Although teachers enjoyed greatly the freedom from complete control by the administration, curiously, there was evidence that some interpersonal strain resulted from this freedom, prior to the announcement of the major innovation. While the teachers were hired with the expectation that they would experiment with new materials and procedures on their own and in collaboration with the subject specialists, a number of the teachers felt, however, that neither the specialists nor the administration were helping them enough in the classroom. This condition is reflected in abstracts from an informal interview with a teacher:

> Paula was quite upset during this part of the interview about what has been happening to her in relation to Rudy so I tried to put her in a different frame. I said, "Well, if you were to describe what was wrong with the school what would you say?" She replied:
>
> The biggest problem is that we've got no leader! The school lacks organization, Rudy can't coordinate, he doesn't know what we are doing, he lacks forcefulness, he sneaks around, and is too interested in what's happening above to be concerned with us, here; that's another problem most of the people above teachers are politically motivated, they are looking for bigger and better things.
>
> In response to the question, "Who is the most helpful and the least helpful?" She laughed, then said:
>
> Probably Alex with the science stuff, I don't know! I didn't get readers for my classes until two months after I was here, and when I asked Stuart to help me on a unit in social studies he brought me a list of books! Stuart wanted me to write a social studies curriculum while I was teaching! I told him I couldn't I was too busy. . .He has no conception of work since he doesn't do any!

In commenting on the Director, Paula said:

> Mark never comes down here! I've only seen him a couple of times since I've been here. . .I think he is a little 'chicken' to come down because he thinks it would be going over Gault's head, [curiously, she was at this point referring to Williams in a benevolent tone even though she said she has seen him only twice] I really don't think Williams knows what sort of job Rudy is doing, only Stan has really talked to him but, I don't think he believes Stan.

When asked, "Do you think Williams should come down here more often?," She retorted:

> Of course! He needs a first-hand view, if he's supposed to be boss why isn't he here more often, he's never had a talk with teachers about what is going on.

While both Mark and Rudy saw their roles as providing the teachers with the opportunity to experiment, the subject specialists felt that the teachers really did not want much help and resisted their advances. In commenting on the performance of one of the teachers, a subject specialist stated:

> I gave a reading lesson in Fred's class using three pieces of equipment. Fred said he was extremely impressed. Three days later he was back to doing it his old way.

Although there appeared to be some strain in the school due to the "excessive" freedom granted teachers, this freedom was prized and often mentioned throughout the year by teachers as a very positive feature of the school.

Progress reports and informal interviews revealed that the basic curriculum was marked by programs new to most teachers. They included the Linguistic approach to reading of the Merrill Series, a Cuisenaire Rod approach to mathematics, the Senesh Plan in social studies, and the EDC curriculum in science. Other new programs that had been introduced were organic reading, the Madison Math Project, and the "Post-Hole" approach to American History. The school also held a one-hour, Tuesday afternoon activity period in which children were allowed, space permitting, to select an activity of special interest to them. They had a choice of art, creative writing, game learning, swimming, music appreciation, discussion seminar, reading, dramatics, ceramics, community walk, math clinic, reading clinic, science, and public speaking. Once a child chose his activity, he was required to spend the following weeks on it. Standard workbooks and approaches, however, were used by some teachers. For example, while two teachers were using linguistics in teaching reading, several were using phonetic keys and others in the intermediate grades were using basal readers and standard workbooks.

The teachers, reorganized along semi-departmentalized lines, did not have completely self-contained classrooms, and were not responsible for teaching all subjects. Rather, there were three teams of three teachers, two primary teams and one intermediate team. For example, the intermediate team consisted of Fred Jackson, Stan Pollard, and Linda Miller. All three taught reading and math, Stan and Fred taught social studies, while Linda taught science. Stan was responsible for all the 4th and half of the 5th grade children, Fred for the rest of the 5th and all of the 6th graders. Faith Bailey, Louise Hamilton, and Maxine Greene split up the first grade children for various subjects; Ruth Johnson, Paula Keller, and Arthur Bradley split up the 2nd and 3rd graders. The children moved from room to room every 45 minutes. There were, on the average, 25 children to each "home room" classroom. The home room teachers were Faith Bailey and Louise Hamilton 1st grade, Ruth Johnson 2nd grade, Paula Keller 3rd grade, Stan Pollard 4-5 grade, Fred Jackson 5-6 grade; Bill Jefferson had a special class of 12 intermediate slow learners. Of the four other teachers, Maxine Greene and Arthur Bradley were additional primary teachers, Linda Miller was an intermediate teacher, and Helen Pelton was a full-time art teacher. The school also had two para-professionals (teacher's aides), a secretary, and several part-time specialists including a speech therapist, a music teacher, and a sewing teacher, who worked with certain classes or individual students. This arrangement meant that teachers could specialize, that the classes, especially in reading, were smaller than the 25 who were in each home room, and that there was more released time for teachers from their classrooms.

The above discussion about internal conditions in the school reflects a great emphasis on educational change prior to the introduction of the Catalytic Role Model in November, 1966; however, it is critical to note that the fundamental conception of schooling in evidence was still traditional in nature. The standard subjects were taught; inculcation of a specific body of knowledge and a number of skills were the central goals of the school; all the children were put through the same sequence of courses; the school day was programmed and scheduled, and the classroom role of the teacher was the same as in the traditional setting, that is, the imparting of a teacher directed, body of information to a whole group of children during specific periods of the day. Put another way, the traditional goals of the school remained intact as did the role of the teachers.

Summary

This chapter revealed (1) that in the lower class urban area of the central city, where Cambire is located, there had been great awareness of the need, and community pressure, for educational change; (2) that in response to this pressure and the need for change in lower class, urban schools, top school officials sought the aid of an outside change agent with a positive educational image; (3) that with top administrative and financial backing this outside change agent proposed and organized the Bureau of Educational Change and its Laboratory Schools; and (4) that he was made responsible for and had great freedom in directing the Cambire School.

We also noted that the Cambire School, one of the schools created to introduce educational innovations, could be characterized as follows at the end of November, 1966: (1) there had been a brief but intensive previous period of change, (2) the school was provided with substantial financial and personnel resources, including full-time specialists, additional full-time regular teachers, and outside educational specialists and agencies, (3) its staff was both willing to change and wanted to do so, (4) an atmosphere of change prevailed in the school and the norm of change received great support, and (5) some interpersonal conflict was in evidence in the school, due in part to an "excess of teacher freedom." The evidence presented in this chapter indicates, therefore, that there appeared to be a very positive climate for educational change in the Cambire School at the end of November, 1966, and that a set of conditions prevailed that would "predispose" the teachers to implement the innovation which was subsequently announced. Some of the conditions contributing to this positive change climate were external to the school, while others existed in its internal environment.

Chapter 5

THE DEGREE OF IMPLEMENTATION OF THE INNOVATION

Evidence presented in the last chapter suggested that a climate conducive to change existed at Cambire at the end of November, 1966, a circumstance which some social scientists have maintained would tend to "predispose" the teachers to implement the new role model announced at that time. But to what extent was the innovation, in fact, implemented in May, 1967? This is the question we propose to examine in this chapter. First, however, we shall discuss the rationale underlying the evaluation and the assessment procedures that were employed.

Evaluation Rationale

Our definition of the degree of implementation of an organizational innovation, as noted earlier, has reference to changes in the organizational behavior of members. We contend, that even for the most technological of organizational innovations, for example, audio-visual aids, their introduction and presence in a school provides no evidence about the degree of their actual implementation. We maintain that teachers must exhibit new behavior patterns before it can be said such innovations are actually being implemented. Moreover, the implementation of the organizational innovation under examination, the catalytic role model, requires not only that teachers must perform many new tasks but also that teachers no longer behave as they previously did in their classrooms. Therefore, the assessment of degree of actual implementation in May required gathering data about the extent to which the teachers no longer behaved in accord with the traditional role model, and also the degree to which they were conforming to the catalytic role model.

Using the term "actual implementation" to refer to the extent to which the behavior of teachers conformed to the new role model, we examined the degree of actual implementation from two perspectives: (1) the quantity of time teachers devoted to trying to implement the new role model and (2) the quality of their performance during this period of time. The measurement of the quantity of innovative effort required assessing and comparing the amount of time each day that teacher behavior conformed to the traditional teaching pattern: teacher-directed, group instruction of single subjects in blocks of time. The measurement of the quality of their innovative effort necessitated assessing the extent to which non-traditional teacher behavior conformed to the new catalytic role model as indicated by a set of 12 behavioral indices that are specified later in this chapter.

In short, two basic questions were asked in the assessment: (1) To what extent did teacher behavior in the classroom in May still conform to the traditional role model that they had followed in November? and (2) To what extent did their performance that was non-traditional in nature conform to the requirements of the new role model? Our assessment of the degree to which the innovation was actually being implemented was based on data secured to answer these two questions.

Before we present and interpret the data it is necessary to specify the kinds of evidence that we decided would lead us to conclude that there was a maximum or minimum degree of actual implementation. If the evidence revealed that the classroom performance of all the teachers during the assessment period was consistently "high" on the 12 behavioral indices, we would then assess the degree of actual implementation as maximal; on the other hand, the degree of actual implementation would be assessed as minimal if it were found that most teachers were spending nearly all of their time behaving according to the traditional model. If it were found that the quality of effort that was made to conform to the new role model was high, but little time had been devoted to attempts to carry out the innovation, it would be appropriate, we reasoned, to judge such behavior as minimal implementation. Furthermore, if the quantity of innovative effort of most teachers was high but the quality of their performance was low, this too would represent minimal implementation in most cases, but not in this case. We reasoned that because the innovation involved a major change in role performance that had been proposed only six months prior to the assessment, we could not legitimately expect all teachers to be performing in accord with all the specifications of the new role model. But we reasoned that it would be possible for all teachers to be making maximal efforts to do so. That is, they could be continually trying to behave in conformity with the new, not the traditional, model. Therefore, we decided that if we found evidence of this kind, it would be indicative of an eventual high degree of actual implementation, and we would treat such a finding as a case of maximal implementation.

Data Collection Procedures

Two general ground rules were specified for the classroom observations in order to minimize the possibility that chance fluctuations in the daily classroom behavior of teachers and systematic observer bias would contaminate the implementation assessment: (1) the field worker must spend a number of weeks observing classrooms and (2) he must conduct the observations in a randomized and unannounced order. The first was carried out by setting aside three weeks, from April 24 through May 12, for classroom observations related to the assessment. The second could not be carried out as easily. The observations of the classrooms by the field worker prior to the period of assessment and statements made by teachers during the formal interviews revealed that many of them were not devoting large blocks of time each day to efforts to implement the new model. Consequently, observations of classrooms on a completely randomized basis during the three weeks set aside for classroom assessment might not provide him with the opportunity to observe adequately the quality of some teachers' performance in connection with the innovation.

To minimize this possibility, the field worker asked each teacher for his weekly "schedule" in order to obtain some indication of when the teacher planned to make efforts to implement the innovation. This information allowed him to rearrange his schedule of classroom visitations so that he would be able to minimize the possibility that he would overlook innovative efforts. He usually prefaced his query with the following remarks:

> I'd like to visit your classroom several times during the next few weeks in order to get a feel for the innovation as you see it and as we have talked about it in our interview. Can you give me your weekly schedule?

He also casually checked with teachers at the beginning of each week to note any changes in their schedules.

These procedures and the observer's presence in classrooms did not appear to have any significant influence on the performance of most teachers. This is not to say that his presence in the school had no influence on teacher behavior. That it did is evidenced by the following situations: (1) one teacher informed the field worker that another teacher told his pupils days in advance of the observer's classroom visit, "an important visitor will be coming in, and when he does you should be quiet, do not move around too much, and no fighting!"; (2) a teacher-in-training told him that one teacher gave her pupils explicit instructions to remain at what they were doing when the field worker visited the class unless they received permission from her to do other things. Moreover, during his visit to her class, this teacher insisted on talking continually to the field worker rather than interacting with her pupils; (3) another teacher revealed to the field worker, after he had visited her class several times, that she told the children about his probable visits and asked them to be "extra nice the next time he came." Evidence to be presented later indicates, however, that minimal implementation existed in each of these three classes; therefore, whatever the bias caused by the observer's queries and presence, they did not materially influence the teacher's performance, and, therefore, the findings of the assessment.

The following procedures for collecting data were used during the three-week period of observing classrooms. To assess the quantity of innovative effort the observer monitored all classrooms daily to determine whether or not teachers were making any efforts to alter their traditional role model performance. This involved making "daily runs" through the halls looking into classrooms. Each run, including a "spot check" for all classes, usually took 2-3 minutes. The number of daily spot checks varied for each class; their frequency was usually determined by the activity the teacher was requiring the class to engage in and the extent to which the field worker sensed it would continue before a possible shift might occur. As many as 15 checks were made on some classes and as few as five for others; overall during the three-week period nearly 500 spot checks were made.

To ascertain the quantity of innovative efforts made by teachers, that is, to determine whether teachers were making "traditional or innovative efforts" during the spot checks, the following ground rules were followed. If the teacher was directing the group

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as a whole or requiring the students to sit at their desks and to engage in the same activity, this was interpreted as evidence that the teacher was behaving according to the traditional role, and thus was not trying to implement the catalytic role model.* Any time it was apparent that the teacher was permitting the children to work individually or in small groups on different subjects or allowing them to move freely about the room, this was interpreted as teacher effort to implement the new role model, and, thus, as "innovative effort." The field worker noted on a daily record (see Appendix A-2, pp. 292-294), which he maintained for each teacher, whether the teacher's behavior at the time of his observations reflected performance in conformity with the traditional or the new role model.

Extended observations in the classrooms were conducted to measure the quality of the implementation effort. Since the observer's very presence might have influenced teacher or student behavior, the following steps were taken to minimize this possibility. When entering a room the field worker made himself as inconspciuous as possible by finding the most obscure corner from which to observe. In taking notes he jotted down key phrases or events to help him remember afterwards what had happened during the class period. When the observation ended he would go to a quiet place in the building to complete the observation schedule (see Appendix A-2).

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*Activities like field trips and outside music lessons were interpreted as traditional behavior because they involved the whole group and no student choice.

First, he would write down as much as he could remember about the physical arrangement and interpersonal activities that had taken place in the room; then, after reviewing all of the available evidence, he made an assessment of the teacher's behavior on the 12 behavioral criteria listed below, using a five-point scale (from "not at all" to "completely"). Did the teacher:

1. Make the materials existing in the room available to students?
2. Arrange the room into work areas?
3. Utilize the room according to these work areas?
4. Permit students to choose their own activities?
5. Permit students to decide whether they want to work individually, in pairs, or in groups?
6. Permit students to move freely about the room?
7. Permit students to interact with each other?
8. Permit students to decide how long they want to remain at a particular activity -- i.e., move freely from one activity to another?
9. Move about the room?
10. Work with as many individuals or groups as possible?
11. Try to act as a guide, catalyst, or resource person between children?
12. Try to act as a guide, catalyst, or resource person between children and the materials?

These 12 behavioral indices, used in evaluating the extent to which teachers when making efforts were behaving in accord with the catalytic role model, deserve further comment.

Since teachers could vary on how well they performed different role requirements, they were assessed on each of them. They, therefore, could vary in the number of the 12 dimensions to which their behavior did and did not conform; for example, a teacher could "permit students to move freely about the room" and "arrange the room into work areas" but not meet any of the remaining criteria; another could conform to five or all of the 12 criteria. Thus, careful attention needs to be paid to each teacher's "behavioral profile" in the analysis of the data.

These 12 criteria were selected on the basis of an analysis of documents describing the new role model and as a consequence of the field worker's discussions with Mark Williams, who introduced it into the school. It should be noted that behavior with reference to these 12 criteria does not provide an exhaustive description of all types of performance of a teacher who completely carried out the innovation. No effort was made to assess whether a teacher had a plan to control his movements in the classroom or whether he "kept tabs" on the activities of each child, nor was an attempt made to determine the extent to which teachers kept records of each child's interests, learning, and accomplishments. It was felt that not all dimensions of the innovation could be evaluated because of time restrictions and therefore some had to be omitted; observations directed at the 12 criteria that were used, it was believed, would provide a good sample of "the quality" of the teachers' role performance.

The 12 indices, although all important, are arranged according to ease of performance. Allowing students free access to all materials is easier to comply with than arranging the room into work areas, while seeing to it that children use the areas of the room "appropriately" -- e.g., the science area for "doing science," is somewhat more difficult; the most difficult specifications to conform to, we assumed, were to act as a guide or facilitator between children and between children and materials. The assessment was based to a large extent on a set of criteria that were less stringent than others that could have been used. Teachers were judged according to whether they permitted students to pick materials, subjects, work mates, to move around the room, and to interact freely. Actually, a more rigorous assessment would have required that the role performance be judged on whether the teacher as a catalyst not only permitted, but effectively encouraged these kinds of student behavior. Since it requires much less effort and training for a teacher to "stand off and allow" pupils to engage in a certain type of behavior than to "encourage" them effectively to perform in a certain way, the teacher ratings on a number of criteria will be higher than they would be if the more stringent encouragement specification had been used. The reason for the use of the less stringent basis of evaluation was a practical one: it would have been difficult or impossible at times to determine whether the teacher was "permitting" or "being encouraging." To guard against the possibility of "penalizing" teachers through misinterpretation of intent, it was therefore decided that the field worker would assess their behavior only on the basis of whether or not they "permitted students" to engage in different types of behavior. After each individual classroom observation, which ranged from 30 to 70 minutes, he attempted to find out whether the teacher(s) thought it to be a typical session.

Observations were conducted in eight classrooms: four primary classrooms, two regular intermediates, one special intermediate, and the art room. The field worker visited one primary, one intermediate, the special, and the art room each three times, spending on the average, two hours of observation time in each class. Observations were carried out four times in another primary room and the second intermediate room; nearly three hours of observations were carried out in each of these rooms. In the remaining two primary rooms, it was possible to schedule visitations that lasted an hour in one case, and one and a half hours in the other. In total, over twenty-one hours were spent observing, in-depth, the quality of staff performance with reference to its conformity to the new role model. During the three weeks devoted primarily to this aspect of the assessment, most of his remaining time was spent monitoring classrooms to assess the quantity of the staff's performance.

To obtain a measure of the reliability of the field worker's observations would have required that another observer be present in classrooms during the period of assessment. This was not done for two reasons. First, at the time of the assessment visitors were continually in the building and classes; another observer might have added to the already high degree of resentment that we noted teachers had toward "outside" visitors. Second, we reasoned that an additional observer could interfere with the high degree of rapport that the field worker had established with the teachers during the earlier part of the school year. To check on the reliability of the field worker's observations, we therefore decided to use other data that could be obtained for this purpose, namely, information to be obtained during formal and informal interviews with the teachers, teachers-in-training at the school, and subject specialists. The evidence we obtained corroborated our two major "assessment findings": (1) that teachers devoted only a small proportion of their time to efforts to perform in accord with the new role model and (2) their performance when they made such efforts was of "low quality."

The following comments, some of which are excerpts from lengthier quotes cited elsewhere in this monograph, constitute a sample of the large body of evidence we obtained from staff members and teacher-aides that supports the conclusion of minimal implementation that emerged from the field worker's classroom observations:

(1) "They [the children] haven't really been choosing. . . we've just had forced multi-activities. The room is not being run as Williams wants it. . ."; (2) ". . .I kept hearing about the great experimental Cambire School, I had high hopes; I was told, 'Don't mind the high noise level'; then, I was greeted by a silent class in rows being yelled at by an authoritarian teacher. . ."; (3) "In

the morning before recess. . .kids were allowed to do different things after completing their work, but it was like play time. . . so I've even had to structure this. . ."; (4) ". . .I think teachers. . .still are giving what you might call lip service to the innovation. . .; many have the wrong impression of it. They have the feeling that since it is to be materials oriented, all you have to do is put the materials in the classroom and just make sure the kids don't knock each other out. . ."; (5) ". . .her [the full time teacher's] reaction is, 'I'm really tired, I think I'll have an activity period'! I don't know whether it's because she doesn't understand it [the innovation] or resists it! Obviously she isn't doing it, but I don't know why. . ."; (6) "He [the full time teacher] doesn't think I should be trained according to the innovation so he has me teaching the whole class most of the time, he, himself, spends little time on it. . ."; (7) "I have to admit. . .I am failing to make as much effort as I was in the past because of my doubts about the assumptions and values. . .and also the effect of this thing on the kids when you let them go. . ."; (8) "Report cards are due; I have to grade these kids; now some things I can fudge around but reading and math, if I have to make out report cards I've got to try to teach them this stuff; let them get rid of report cards and sell the parents on it and then I'll sit back and let them play all day. . . ." (9) "He [Williams] told me out in the hall, 'Boy the program is really falling apart and another group is supposed to come visit here on Monday. . .'; so I told him, 'Don't worry the teachers will put on a show for them.' I guess he thinks it's too quiet around here"; (10) ". . .I am just going to settle back and let August ease on in, if they [the children] don't act up in class, I'll let 'em do whatever they damned well please. . .I'm not going to 'break my ass' now that he [Williams] doesn't want me back!"

Thus, in the light of this body of testimony which corroborates the highly systematic techniques used in the classroom observations by a trained observer, we feel confident in the findings and conclusions of the assessment.

Data Reduction Procedures

In order to treat qualitative observational data in a quantitative manner, it is necessary to translate, through a coding scheme, the raw data into numerical values. We now report the procedures that were used in this connection.

The quantity of innovative effort made by each teacher was translated into percentages by dividing the amount of time, recorded in minutes, that he spent each day performing according to the traditional model by the total "minutes of classroom time available," given the constraints of the schedule, and then subtracting this percentage from one hundred per cent. "Available classroom time" was specified as 250 minutes; this figure was calculated as follows. We subtracted a half hour for lunch and a half hour for recess from the total time between 9:00 a.m. (when school officially started) and 2:10 p.m. (when the bell rang for children to get their wraps to go home). Because in some instances the observer was not able to get complete daily pictures for every classroom, the percentages were adjusted by dividing the observed time devoted to the traditional approach by the total "monitored time." In most cases "minutes available" and "minutes monitored" were the same. The data are summarized in daily, weekly, and overall percentages in Tables 5-2 through 5-8 for individual teachers and for the total staff.*

To demonstrate how the qualitative assessment was made for teachers, we will present abstracts of two in-depth observations made by the field worker of the Intermediate #1 teachers, who exhibited the greatest quantity of innovative effort in the classroom. Each abstract, following the form of the observation schedule (Appendix A-2), includes his general overview of teacher behavior in the classroom during the period of observation and then his specific evaluation of their behavior on each of the 12 behavioral indices. Sketches made of the classroom for each observation are not presented here. Each sketch of the physical aspects of the room at the time of observation permitted us to note whether "areas" were apparent, the kinds of equipment that were used and the types of materials that were made available. After the two abstracts are presented, the procedures used to calculate an average rating for each teacher on the 12 criteria are discussed. Again the Intermediate #1 teachers will be used.

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*Neither the art room nor the special intermediate room were used in this analysis. The art class was scheduled separately for halves of classes at different times during the week. The children had to go to art whether they chose to or not. Moreover, the art teacher would visit some classes but at that time everyone would have to do art. Because of this, art activities contributed to the traditional approach. In the case of the special intermediate class, the teacher never had a schedule from the beginning of the year nor dealt with the children with a traditional approach. The field worker reported that the teacher seemed to consciously omit either kind of effort. The children were primarily watched during the day.

April 24 Observation (11 a.m. to 12 noon): The General Overview

Two teachers were in the room with twenty-four children. The classroom was quite noisy, and small group and individual activities were in evidence. The two teachers allowed a number of children to work with microscopes on such things as human skin, hair, and saliva, permitting some to remain all period, others to leave early, and others to join later; up to eight children were involved at one time, at other times only two. Stan visited the group four times. Linda, a large part of the period (about 25 minutes), coordinated the efforts of four girls drawing a large map in connection with a social studies unit; at other times she "talked" to the two or three children who were either reading independently or working on math problems. Stan also walked among students to some extent but did not make contact during the period with a large number (10-13) of the 24 children in the room. Along with the use of microscopes, reading, working on math, and map making, teachers allowed a noticeable number of children to engage in "gaming" -- e.g., playing cards, Peggity, and Clue were several of the activities. Neither teacher approached a hard core of seven or eight children who became involved in this sort of activity and who did not switch from it while I was there during the observation. There were four boys who did not use any of the materials in the classroom and created a number of disturbances by playing tag, punching and shoving each other, and then running close to either Stan or Linda to avoid being caught by the others. However, neither teacher tried to encourage them to become interested in doing other things. Stan, losing his temper twice, did send two of the four downstairs to the office the second time. The lunch bell ended the period.

April 24 Observation (11 a.m. to 12 noon): The Specific Evaluation*

(1) Neither teacher placed any restrictions on using materials available in the room; both teachers were therefore rated as high on permitting use of available materials.

(2) The room was arranged into science, reading, and drawing areas, so both teachers were rated as high on room arrangement.

(3) Both were rated as moderate on utilization of room. The science area was being used for science; however, both teachers allowed children who were playing cards there to

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* It should be noted that the original five point rating scales were collapsed for clarity in this analysis: 1,2 were set equal to 1;3 equal to 2; and 4,5 equal to 3. Therefore, in the discussion and statistics which follow 1 = low, 2 = moderate, and 3 = high.

remain. The teachers also permitted the reading area to be used for playing games and for children to talk about TV programs. The art area was in fact not used as such; the teachers permitted everything to be pushed back to make room for some of the card players.

(4) Both were rated as high on permitting student choice of subjects. Neither placed restrictions on the children other than those who were "horsing around" and even then they were not stopped by Stan, except for two students who began a fist-fight.

(5) Both were rated as high on permitting students to choose whom they wanted to work with. However, Stan was "slightly" more restrictive than Linda; he talked to a number of students admonishing them to "do your own work," "don't ask him for help, do your own thinking." Linda, more passive, allowed the children to do what they wanted to do without comment. Neither encouraged children to interact in order to learn from each other.

(6) Stan was rated moderate on permitting movement and Linda was rated high, since Stan stopped a number of students from moving about whom he thought "weren't doing much" and were "bothering others," while Linda did not say anything with respect to these matters.

(7) Because Linda did nothing to inhibit interaction among the children while Stan actually admonished a number of children

who were interacting by demanding that they do their own work, and restricted others who were in his eyes "fooling around," Linda was rated as high on permitting students to interact with each other and Stan, moderate. Neither encouraged children to interact.

(8) Again, Linda did nothing along these lines to inhibit the children while Stan wanted quite a few (seven) of the children to start working, especially those of whom he would say "they're flitting about from one thing to another" or "they're doing nothing to settle down to get some work done, this isn't just a play period"; Linda was rated as high and Stan, moderate.

(9) Both teachers spent about half the time during the observation moving about the room. But, neither attempted to get to all children. The other half of the time they simply stood and watched unless some child came to them and initiated the interaction with a question or a plea for help. Both were rated "moderate."

(10) Of the time spent moving about, Stan interacted more with different groups and individuals. Linda did very little. Stan was, therefore, rated "moderate," Linda as "low."

(11) and (12) Stan was very restrictive -- for example, at the microscopes he would issue directives such as "That's enough with the hair; put the slide with saliva on," -- "It doesn't take all day for you to look at the skin." He asked questions but they were not of a probing nature. Linda was

much more passive and didn't ask any questions to which children could react or which led them to ask additional questions. The teacher interaction with children did not indicate efforts to act as catalysts either between children, or between children and materials. Both teachers, therefore, were rated low on their efforts to act as catalysts between children and materials or between children.

The numerical equivalents for these ratings are in the "April 24" columns of Table 5-1. Stan is coded as "A" and Linda as "B." The quality of performance according to the 12 criteria in this classroom on April 28, May 1, and May 12 was essentially the same for both teachers. The May 1 observation, therefore, was treated as representative.

May 1 Observation (12:35 p.m. to 1:20 p.m.): The General Overview

There were twenty-six children in the room; both teachers were present. The high noise level which the teachers allowed was at times almost deafening to the observer. Throughout this period nearly half (12/26) of the children at one time or another, were pushing, tickling, shoving, feigning fighting, while there were five who engaged in these activities the entire period. These conditions went "unnoticed" by both teachers. Most of the time the majority (17/26) of children were engaged in active conversation and game playing -- e.g., Spill and Spell, Rook, Peggity, without either teacher ever talking to them. Only one girl was observed reading a book during this

Table 5-1. Profile of Ratings For Intermediate #1 Teachers (A And B) For Each Period Of Observation And An Overall Average

	April 24 60 min.		April 28 60 min.*		May 1 45 min.		May 12 60 min.		Averaged** Profiles	
Criterion	A	B	A	B	A	B	A	B	A	B
1. Permit use of all materials. .	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
2. Arrange room into areas . . .	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
3. Utilize the areas	2.00	2.00	-	-	1.00	1.00	1.00	1.00	1.36	1.36
4. Permit choice of subjects . .	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
5. Permit choice in number of learning mates	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
6. Permit free movement	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.73	3.00
7. Permit student interaction . .	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.73	3.00
8. Permit shift in activities . .	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.73	3.00
9. Teacher movement in room . . .	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.62	1.62
10. Interact with students	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.62	1.00
11. Try to act as a catalyst between children	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12. Try to act as a catalyst between child and materials	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

* Blanks in April 28th observation due to insufficient data. Code: 1 = low, 2 = moderate, 3 = high.

** Average score adjusted for differences in lengths of observations.

period; neither teacher approached her. The three girls with the microscopes were talking about several TV programs they had watched the night before. A boy tried to put a plastic model of human anatomy together; neither teacher approached him. Three children seemed to be passing their time individually, but without benefit of materials; they were sitting quietly, alone. Stan was playing Rook with eight children while at different times others were allowed to watch. The three girls working with Linda consumed most of her time. Most of the children were not approached by the teachers, nor did these children go to them except for non-academic reasons -- e.g., "Johnny's pushing me" -- "he took my box." The teachers did not concern themselves with the total classroom membership. Moreover, there was no interaction between the teachers at all. This innovative effort ended abruptly when Stan (without consulting Linda at the time) yelled out over the humming class: "OK put everything away and get out your social studies books." The observation ended as the groans and moans of the class were subsiding.

Linda and Stan said later in the day separately that what I saw "was fairly typical, perhaps a little noisier than normal."

May 1 Observation (12:35 p.m. to 1:20 p.m.): The Specific Evaluation

(1) There did not seem to be any restrictions whatsoever; children were permitted to go into cupboards; teachers allowed

them to handle all materials in the room. Neither Stan nor Linda admonished any child for taking any piece of equipment or materials. Both were rated, therefore, as high on permitting use of available materials.

(2) Both were also rated high on room arrangement. The room was arranged into corners -- those with recognizable subjects associated were science, reading, and social studies.

(3) Both were rated, however; low on utilization. During this period the one child who was in the social studies area was trying to put together a plastic model of a human; neither teacher suggested he go to the science cupboard to get a reference book, etc. The girl who was reading could not do so in the reading corner because the teachers allowed three boys to play Peggity and two girls to sit and talk about TV programs in the same area.

(4) Other than the children working with Linda and those playing Rook with Stan, the rest were "on their own," and did what they wanted. Moreover, Stan allowed several students playing cards with him to leave with no restrictions. Therefore, both were rated as high on permitting children to choose their own activities.

(5) Neither teacher required children to do other than what they wanted unless, as it happened four times during this observation, their choice of learning mates resulted in some interpersonal problem; these groups were promptly dispersed by

Stan to different parts of the room. Therefore, both were rated as high.

(6) Both teachers permitted the children to move freely about as they pleased -- e.g., one child who worked part of the time with some green plants was even permitted to go downstairs to get tubing and a bottle; he filled it with water and set up his plants near the window, leaving the room several times for such materials as paper toweling and sand with no restriction placed on him by either teacher. Neither teacher, however, tried to act as a guide for him. Both teachers were rated as high on permitting freedom to move.

(7) The only time Stan concerned himself with interaction was when it resulted in a discipline problem -- e.g., fighting and arguing. Other than that, children were allowed to interact freely. Linda never put any restrictions on any child. Both teachers were rated as high on permitting student interaction. N.B.: The observer, however, witnessed neither teacher encouraging interaction.

(8) "Lack of observable restrictions" led the observer to rate both teachers as high on permitting student movement.

(9) Stan remained at the card table during the total period of observation playing Rook (as a participant rather than a teacher -- e.g., "that's my trick," "put the card back," "you're cheating"). Linda worked all the time with three students on a social studies lesson. She would go from a map on

the wall to the books they were reading, completely ignoring the rest of the class during the observation. Therefore, both were rated low on movement about the room.

(10) (11) and (12) Since Linda spent all her time with three students on a directed geography lesson and Stan played cards as a participant, both were rated low on trying to work with as many students as possible, on trying to act as a catalyst between children, and on trying to act as a catalyst between children and materials.

The numerical equivalents for these ratings are in the May 1 columns of Table 5-1. As noted earlier, the length of the observations of a teacher's behavior varied, for example, Teacher A in Intermediate #1 was observed four times: three 60-minute observations and one 45-minute observation. Therefore, we had to weight each separate rating for a teacher on a particular criterion in proportion to the length of the observation before calculating an average rating for him on that as well as the other eleven behavioral criteria. We did this by multiplying the rating made during the observation by the length of the observation in minutes. Then, by summing the products (the weighted ratings) for a teacher on a particular criterion and dividing this sum by the total time (again in minutes) spent observing this teacher on this criterion, we arrived at his average rating. To illustrate, Teacher A on "permitting freedom of movement" had a 60-minute rating of 2 (April 24), a 60-minute rating of 3 (April 28), a 45-minute rating of 3 (May 1) and another 60-minute rating of 3 (May 12). (60 x 2) + (60 x 3) + (45 x 3) + (60 x 3) ÷ 225 = 2.73 average rating which is recorded in Table 5-1 under the "Averaged Profiles" column for Intermediate #1, Teacher A. We used this procedure for all teachers on each of the 12 evaluative criteria; the averaged profiles for each teacher along with an overall school profile are presented later in Table 5-9. We obtained the overall school profile included in Table 5-9 by adding together all the averaged teacher ratings on each particular criterion and dividing by the total number of teachers used.

Findings

To reiterate an important point, this assessment focused on teachers' classroom behavior to determine the degree of implementation of the innovation. The line of reasoning was simply that the central thrust of the innovation, as conceived by Mark, was an entirely new classroom role for teachers. The extent to which teacher behavior in the classrooms conformed to the new model would, therefore, indicate the degree to which the innovation was actually being implemented in the school in May.

Perusal of the individual classroom efforts, Tables 5-2 through 5-7, shows that there was a great deal of daily fluctuation in the amount of time devoted to trying to implement the innovation in all classrooms. Moreover, when the individual weekly rates are compared, rooms seem to shift up and down. There does not seem to be a common pattern -- c.f. 14.16%, 29.95%, 31.56% (Primary #1); 0.00%, 0.00%, 5.31% (Primary #2); 9.60%, 8.33%, 25.00% (Primary #3); 9.60%, 19.12%, 4.80% (Primary #4); 44.40%, 35.33%, 38.80% (Intermediate #1); 4.80%, 0.00%, 10.92% (Intermediate #2).

The quantity of overall staff weekly effort recorded in Table 5-8 tends to be constant -- c.f., 14.24%, 14.81%, and 19.22%. The small but noticeable rise, the additional five per cent effort during the week of May 8-12 can probably be explained by two factors. First, in the Primary #1 class all that week a person from the Bureau was taking movies of the class "doing the Innovation." This required the teachers in that room to give more time to it than either of the two previous weeks. Moreover, because the field worker was having a difficult time getting observational data on Primary #2, #3, #4, and Intermediate #2, he was forced to ask the teachers in these classrooms during the week whether they were going to try to conduct "the activity period" (one of their terms for the innovation) that week, and when they planned to do so, so that he could observe it. This probably led them to spend more time that week trying the innovation than they normally would have. Those two factors probably account for the slight rise in total staff effort.

If we view percentage scores of 76% to 100% as very high innovative effort, 51% to 75% as moderately high, 26-50% as moderately low, and 0-25% as very low effort, the findings reveal that (1) general overall teacher innovative effort, quantitatively, was very low

Table 5-2. Amount Of Classroom Time Devoted To Performing In Accord With The Traditional Role Model As Compared With The Catalytic Role Model (Daily, Weekly, And Overall Percentages For) Primary #1

	Minutes Available	Minutes Monitored	Traditional Role Model Behavior In Minutes	Traditional Role Model Behavior (in percent)	Catalytic Role Model Behavior (in percent)
April 24	250	250	250	100.00	0.00
25	250	250	205	82.00	18.00
26	250	210	165	78.57	21.43
27	250	250	175	70.00	30.00
28	250	205	205	100.00	0.00
Weekly Total	1250	1165	1000	85.84	14.16
May* 1	250	250	180	72.00	28.00
4	250	250	175	70.00	30.00
5	250	205	160	78.05	21.95
Weekly Total	750	705	515	73.05	26.95
May 8	250	250	135	54.00	46.00
9	250	250	205	82.00	18.00
10	250	250	175	70.00	30.00
11	250	250	145	58.00	42.00
12	250	220	175	79.55	20.45
Weekly Total	1250	1220	835	68.44	31.56
Overall Total	3220	3090	2350	76.05	23.95

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* On Tuesday and Wednesday of this week all students were taking tests required by the school system in all its schools. For the most part instructional activities were suspended during this period. Also on Wednesday afternoon the teachers completed our questionnaire needed for the Project. School was dismissed at noon.

Table 5-3. Amount Of Classroom Time Devoted To Performing In Accord With The Traditional Role Model As Compared With The Catalytic Role Model (Daily, Weekly, And Overall Percentages For) Primary #2

		Minutes Available	Minutes Monitored	Traditional Role Model Behavior In Minutes	Traditional Role Model Behavior (in percent)	Catalytic Role Model Behavior (in percent)
April	24	250	250	250	100.00	0.00
	25	250	250	250	100.00	0.00
	26	250	250	250	100.00	0.00
	27	- Absent	-	-	-	-
	28	250	250	250	100.00	0.00
Weekly Total		1000	1000	1000	100.00	0.00
May	1	250	250	250	100.00	0.00
	4	250	250	250	100.00	0.00
	5	250	250	250	100.00	0.00
Weekly Total		750	750	750	100.00	0.00
May	8	250	250	250	100.00	0.00
	9	250	250	250	100.00	0.00
	10	250	250	250	100.00	0.00
	11	250	250	190	76.00	24.00
	12	250	130	130	100.00	0.00
Weekly Total		1250	1130	1070	94.69	5.31
Overall Total		3000	2880	2820	97.92	2.08

Table 5-4. Amount Of Classroom Time Devoted To Performing In Accord With The Traditional Role Model As Compared With The Catalytic Role Model (Daily, Weekly, And Overall Percentages For) Primary #3

	Minutes Available	Minutes Monitored	Traditional Role Model Behavior In Minutes	Traditional Role Model Behavior (in percent)	Catalytic Role Model Behavior (in percent)
April 24	250	250	190	76.00	24.00
25	250	250	190	76.00	24.00
26	250	250	250	100.00	0.00
27	250	250	250	100.00	0.00
28	250	250	250	100.00	0.00
Weekly Total	1250	1250	1130	90.40	9.60
May 1	250	250	250	100.00	0.00
4	250	250	190	76.00	24.00
5	250	220	220	100.00	0.00
Weekly Total	750	720	660	91.67	8.33
May 8	250	220	160	72.73	27.27
9	250	250	190	76.00	24.00
10	250	250	190	76.00	24.00
11	- Absent	-	-	-	-
12	- Absent	-	-	-	-
Weekly Total	750	720	540	75.00	25.00
Overall Total	2750	2690	2330	86.62	13.38

Table 5-5. Amount Of Classroom Time Devoted To Performing In Accord With The Traditional Role Model As Compared With The Catalytic Role Model (Daily, Weekly, And Overall Percentages For) Primary #4

	Minutes Available	Minutes Monitored	Traditional Role Model Behavior In Minutes	Traditional Role Model Behavior (in percent)	Catalytic Role Model Behavior (in percent)
April 24	250	250	220	88.00	12.00
25	250	250	220	88.00	12.00
26	250	250	220	88.00	12.00
27	250	250	220	88.00	12.00
28	250	250	250	100.00	0.00
Weekly Total	1250	1250	1130	90.40	9.60
May 1	250	250	150	60.00	40.00
4	250	210	180	85.71	14.29
5	250	220	220	100.00	0.00
Weekly Total	750	680	550	80.88	19.12
May 8	250	250	250	100.00	0.00
9	250	250	250	100.00	0.00
10	250	250	250	100.00	0.00
11	250	250	190	76.00	24.00
12	250	250	250	100.00	0.00
Weekly Total	1250	1250	1190	95.20	4.80
Overall Total	3250	3180	2870	90.25	9.75

Table 5-6. Amount Of Classroom Time Devoted To Performing In Accord With The Traditional Role Model As Compared With The Catalytic Role Model (Daily, Weekly, And Overall Percentages For) Intermediate #1

	Minutes Available	Minutes Monitored	Traditional Role Model Behavior In Minutes	Traditional Role Model Behavior (in percent)	Catalytic Role Model Behavior (in percent)
April 24	250	250	130	58.00	42.00
25	250	250	145	58.00	42.00
26	250	250	250	100.00	0.00
27	250	250	85	34.00	66.00
28	250	250	85	34.00	66.00
Weekly Total	1250	1250	695	55.60	44.40
May 1	250	250	90	36.00	64.00
4	250	250	145	58.00	42.00
5	250	250	250	100.00	0.00
Weekly Total	750	750	485	64.67	35.33
May 8	250	250	150	60.00	40.00
9	250	250	190	76.00	24.00
10	250	250	90	36.00	64.00
11	250	250	205	82.00	18.00
12	250	250	130	52.00	48.00
Weekly Total	1250	1250	765	61.20	38.80
Overall Total	3250	3250	1945	59.85	40.15

Table 5-7. Amount Of Classroom Time Devoted To Performing In Accord With The Traditional Role Model As Compared With The Catalytic Role Model (Daily, Weekly, And Overall Percentages For) Intermediate #2

	Minutes Available	Minutes Monitored	Traditional Role Model Behavior In Minutes	Traditional Role Model Behavior (in percent)	Catalytic Role Model Behavior (in percent)
April 24	250	250	190	76.00	24.00
25	250	250	250	100.00	0.00
26	250	250	250	100.00	0.00
27	250	250	250	100.00	0.00
28	250	250	250	100.00	0.00
Weekly Total	1250	1250	1190	95.20	4.80
May 1	250	250	250	100.00	0.00
4	250	250	250	100.00	0.00
5	250	250	250	100.00	0.00
Weekly Total	750	750	750	100.00	0.00
May 8	250	250	190	76.00	24.00
9	250	250	180	72.00	28.00
10	250	190	190	100.00	0.00
11	250	250	250	100.00	0.00
12	250	250	250	100.00	0.00
Weekly Total	1250	1190	1060	89.08	10.92
Overall Total	3250	3190	3000	94.04	5.96

(16.22%), (2) that weekly overall school efforts were very low (14.24%, 14.81%, 19.22%), (3) that with one notable exception (Table 5-8, Intermediate #1, 40.15%) overall individual classroom efforts were very low, (4) that a few daily (and fewer weekly) efforts in individual classrooms were moderately low, and (5) that only four daily efforts, all in the same room (Intermediate #1), could be judged moderately high, while no daily effort was ever very high.

The evidence thus reveals that during this three-week period in May the staff as a whole was spending most of its time (84.73%) in behavior that tended to conform to the traditional role model and that "minimal" time was devoted to efforts to implement the catalytic role model.

We now turn to the quality of the innovative effort. Table 5-9 contains an overall average profile for the staff as well as the profile averages for the individual teachers. The classrooms and their teachers are presented in order of the quantity of effort made, and the criteria are listed according to the magnitude of their value in the overall staff profile. Two striking findings emerge from an examination of Table 5-9. First, there seems to be no clear association between amount of effort made during this period and the quality of these efforts, even though the overall effort varies from about 6% to 40% for the first eight teachers.* Assuming equal ability, one

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*The two teachers whose behavior is described in the last two columns of Table 5-9 had substantially lower profiles compared to the other eight; one teacher, Primary #2, devoted only one hour to this "innovation" during the assessment; the other, Intermediate Special, made no observable shift in classroom behavior between November and May in order to judge quantity of innovative effort.

Table 5-8. Amount Of Classroom Time Devoted To Performing In Accord With The Traditional Role Model As Compared With The Catalytic Role Model (By Class And Week) For The Staff

By Class and By Week	Minutes Available	Minutes Monitored	Traditional Role Model Behavior In Minutes	Traditional Role Model Behavior (in percent)	Catalytic Role Model Behavior (in percent)
By Class:					
Primary #1	3250	3090	2350	76.05%	23.95%
Primary #2	3000	2880	2820	97.92%	2.08%
Primary #3	2750	2690	2330	86.62%	13.38%
Primary #4	3250	3180	2870	90.25%	9.75%
Intrmdt #1	3250	3250	1945	59.85%	40.15%
Intrmdt #2	3250	3190	3000	94.04%	5.96%
By Week:					
April 24-28	7250	7165	6145	85.76%	14.24%
May 1-5	4500	4355	3710	85.19%	14.81%
May 8-12	7000	6760	5460	80.73%	19.22%
GRAND TOTAL	18750	18280	15315	83.73%	16.22%

would expect to find higher quality profiles for those who were devoting nearly seven times the effort. Moreover, the fact is that the teacher in Intermediate #2 was trying to act, during his "innovative efforts," much more as a catalyst than the others as evidenced by his ratings of 2.65 on #10, #11, and #12.

The second point is that most teachers were not trying to act as catalysts or guides during the period when they were making innovative efforts. This is evidenced by the 1.23 ratings on criteria #11 and #12, and the 1.39 rating on criterion #10 of the Overall School Profile. It is important to note that on four of the criteria (#9-12) requiring new catalytic teacher behavior, teacher performance was, on the average, relatively "low." Even on criteria (#6-8), which required a minimum of teacher effort, their average performance was assessed as "below moderate." The staff, in general, was judged as "nearly moderate" in meeting only four of the behavioral criteria (#2-5), and only on #1, "allowing use of all materials," was the staff's average performance judged as relatively "high." Our overall interpretation of Table 5-9 is as follows: during the short periods of time when teachers made any effort to implement the innovation, they either did little more than simply allow children to do what they wanted to do, short of physical harm to each other or directed the children in a multi-activity classroom. The majority gave little attention to the room arrangement (6/10), while most gave little attention to the use of the physical space in their rooms (8/10) or to steps they were expected to follow to serve as

Table 5-9. Individual Teacher Profiles Summarizing The Quality Of Their Innovative Efforts, And An Overall Staff Profile

Criterion*	Intmd#1** Teacher		Prmry#1 Teacher		Prmry#3 Teacher	Prmry#4 Teacher		Intmd#2 Teacher	Prmry#2 Teacher	Intmd-S Teacher	Overall Staff Profile
	A	B	A	B	A	A	B	A	A	A	
1. Permit use of all materials	3.00	3.00	2.33	2.33	3.00	3.00	3.00	3.00	-	2.00	2.74
2. Permit student interaction	2.73	3.00	2.40	2.00	2.00	2.00	2.00	2.65	1.00	1.00	2.08
3. Permit free movement	2.73	3.00	1.00	1.00	3.00	1.00	1.00	3.00	3.00	1.00	1.97
4. Permit shift in activities .	2.73	3.00	2.20	1.67	3.00	1.00	1.00	2.30	1.00	1.00	1.89
5. Permit choice of subjects. .	3.00	3.00	1.67	1.67	3.00	1.00	1.00	1.35	-	1.00	1.85
6. Permit choice in number of learning mates	3.00	3.00	1.80	1.00	3.00	1.00	1.00	1.65	1.00	1.00	1.75
7. Teacher movement in room. .	1.62	1.62	3.00	2.20	1.00	2.33	1.00	2.65	1.00	1.00	1.74
8. Arrange room into areas. . .	3.00	3.00	1.00	1.00	1.00	2.33	3.00	1.00	1.00	1.00	1.73
9. Utilize the areas.	1.36	1.36	1.00	1.00	1.00	2.33	3.00	1.00	1.00	1.00	1.41
10. Interact with students . . .	1.62	1.00	2.20	1.40	1.00	1.00	1.00	2.65	1.00	1.00	1.39
11. Try to act as a catalyst between children.	1.00	1.00	1.60	1.00	1.00	1.00	1.00	2.65	1.00	1.00	1.23
12. Try to act as a catalyst between child and materials	1.00	1.00	1.60	1.00	1.00	1.00	1.00	2.65	1.00	1.00	1.23
(Quantity of Overall Effort)	(40.15%)		(23.95%)		(13.38%)	(9.75%)		(5.96%)	(2.08%)	-	(16.22%)

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* The criteria are presented in ranked order according to overall school average.

** Classes are presented in descending order of teacher quantity of innovative effort; the code is 1 = low, 2 = moderate, 3 = high. The blanks in teacher profiles indicate insufficient data.

catalysts to pupil learning (9/10). In short, the staff exhibited, qualitatively speaking, a minimal degree of implementation of the catalytic role model.

The variations which do occur among individual teachers in their role performance as evidenced in Table 5-9, however, deserve comment: (1) the classroom teachers in Intermediate #1 devoted the most time to the innovative effort; however, they did little more than permit the children at certain times each day to do what they wanted; (2) the teachers in Primary #1, who made the second largest effort, differed in the extent to which they tried to act as catalysts. Teacher A made more effort in this respect than Teacher B, but both were primarily directive and tried to limit the students' freedom of movement, choice of subjects, and choice of learning mates. Teacher A engaged in a great deal of "individualized instruction" engaging students in work sheet activities usually in connection with reading and math; (3) the Primary #3 teacher during her innovative efforts granted pupils considerable freedom, but did not serve as a catalyst in any respect; (4) in Primary #4 the performance of the two teachers was highly similar; they generally did not allow children to select what they wanted to work on; most materials were used, but they were employed in a structured setting. They simply were supervising pupils in a structured multiple-activity classroom, with one of the teachers "standing by" and the other seeing to it that the students kept "their noses to the grindstone"; (5) during the small percentage of the time that the Intermediate #2 teacher devoted to innovative effort, he tried to get all children to do "constructive" things; indeed his attempts "to help" were so strong that at times he acted as a traditional director, rather than as a catalyst, hence, the 2.65 rather than 3.00 ratings on criteria #10, #11 and #12; (6) the single in-depth observation made of the Primary #2 teacher did not provide adequate data to complete a full set of ratings. During this period, however, she was continually telling children from a corner of the room to "sit down," "keep quiet," "stop doing that"; she did not actively involve herself in trying to facilitate learning; (7) the performance of the Intermediate-Special teacher was essentially the same as that of the Primary #2 teacher. He basically tried to keep his students "contained."

Our assessment of the overall quality of innovative effort, thus, revealed that it consisted primarily of the teachers' insertion into traditionally-scheduled, self-contained classrooms varying "chunks" of free time for their pupils each week. During these periods we found little evidence of behavior reflecting the basic notion of teachers serving as "catalysts." Most teachers used these periods essentially as "free play" sessions, periods when children were free to do as they wished, short of harming each other; they did little more than see to it that their pupils did not get hurt and when the time came, returned to their traditional schedules. Teachers, in short, tended to behave as guards rather than guides and, thus, failed to treat this time as part of a child's educational experience in which a teacher would encourage his pupils to learn in accord with their individual interests. Therefore, we conclude that the quality of the innovative effort of teachers in May was minimal.

Summary

This chapter showed that the major organizational innovation, the catalytic role model, announced in November was not being implemented in May despite a set of apparently "positive" antecedent and prevailing conditions in the school system, community, and school.

After a brief discussion of the rationale underlying the evaluation methods employed we presented the data-collection and data-reduction procedures used to determine the extent to which the teachers had changed their performance in the classroom from a traditional role definition in November to behavior that conformed to the catalytic role model in May. Analysis of the evidence gathered showed that the staff, in May, was still behaving for the most part in accord with the traditional role model, and was devoting very little time to trying to implement the innovation; moreover, we presented evidence that showed that the quality of its performance, when efforts were made to conform to the catalytic role model, was of "low" quality. These findings led us to conclude that the degree of implementation of the innovation in May was minimal.

Chapter 6

BARRIERS TO THE IMPLEMENTATION OF THE INNOVATION: OBSTACLES ENCOUNTERED BY TEACHERS

Why were teachers at the Cambire School making so little effort to implement the catalytic role model in May, 1967, six months after the announcement of the innovation? Our analysis of the case study data led us to conclude that this condition could primarily be attributed to five circumstances: (1) the teachers' lack of clarity about the innovation, (2) their lack of the kinds of skills and knowledge needed to conform to the new role model, (3) the unavailability of required instructional materials, (4) the incompatibility of organizational arrangements with the innovation, and (5) lack of staff motivation. Our findings revealed that the first four conditions existed at the outset and throughout the period of attempted implementation and that the fifth emerged during this period.

In this chapter we shall present evidence to support these conclusions. In the following one we offer an analysis of the underlying factors that accounted for the existence of the five obstacles that were associated with the minimal implementation of the innovation.

Lack of Clarity about the Innovation

The first circumstance that acted as a major barrier to implementation was that the teachers never obtained a clear understanding of the innovation. We asked the teachers[*] whether they had a clear picture of what they were expected to do in carrying out the innovation at several points in time: in November, when it was announced, in January, just before they were asked to make their first efforts to implement the innovation, and in May, just prior to our assessment of implementation.

During our formal interviews with the teachers, we asked them to describe their understanding of the innovation in November. We focused our questions on their interpretation of the innovation after it was first described to them and on their perception of behavioral changes that would be required of them. Table 6-1 indicates their most frequent responses. Most teachers mentioned both new types of behavior that would be expected of them and previous kinds of behavior in which they had engaged that would no longer be appropriate. Several mentioned only new types of behavior. A majority (6/10) of the teachers indicated that the innovation required abandoning formal lessons and group recitations, while a few (3/10) mentioned that the teacher would be required to cease acting as an authority figure. Nearly all (8/10) said that the innovation would require them to "give pupils freedom to choose their activities," while a slight majority (6/10) said that the innovation would require "a multiple-activity classroom with individual attention" and "self-instructional, high interest materials." Slightly less than a majority (4/10) mentioned "tolerating noise," "acting as an advisor or supporter," and "working with teachers and subject specialists" as necessary behavioral requirements. Three teachers noted that "moving about the room" was also an essential element of the innovation. The majority (6/10) mentioned four or five "new types of behavior." No teacher mentioned all seven of the behavior items listed in Table 6-1.

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[*] There were data available at the time of the assessment of all 11 full-time teachers. However, it was brought to the attention of the observer on several occasions by different teachers that "one of the teachers" had indicated privately, to them, that "I am telling him what I think he wants to hear." The information this teacher provided is, therefore, open to serious question. With such a small number of teachers, the omission of such information is serious. By the same token, however, given such a small sample, questionable information if used might substantially distort the findings. The decision was made, therefore, to exclude information offered by this teacher from the analysis in this chapter.

In addition to the responses presented in Table 6-1, one teacher said that "teaching by a curriculum guide," would no longer be appropriate and another mentioned that teachers should not "follow the guide _too_ _closely_." A third said that "teachers would no longer be responsible for scheduling all day." Three teachers mentioned one of the following "new types of behavior," which they thought would be required: "toleration of visitors," "a great deal of interaction with pupils to find out what they know," and "keeping individual records"; two other teachers mentioned "setting up the room into areas" as new behavior required by the innovation.

Most, but not all of the requirements they described deal with very general aspects of the innovation. The _key_ idea of the innovation, namely that the teacher should serve as a catalyst to pupil learning, was only touched on by four of the ten teachers who

Table 6-1. Types Of Behavior Mentioned By Teachers When They Were Asked To Describe Their Notions Of The Innovation And What They Thought Its Initiator Expected Them To Do (N = 10)

	Teachers Responding Affirmatively:									
Behavior Mentioned:	1	2	3	4	5	6	7	8	9	10
Behavior to be abandoned:										
1. Teach formal lessons with group recitations		x			x	x	x	x	x	
2. Acting as an authority figure	x						x		x	
New Types of Behavior:										
1. Give pupils freedom to choose activities	x	x	x	x	x	x	x		x	
2. Conduct multiple activity, individual attention		x	x		x	x		x		x
3. Maintain room with "self-instructional, high interest," materials for pupils		x	x	x			x	x		x
4. Tolerate noise	x		x		x		x			
5. Act as an advisor or offer support						x	x	x		x
6. Work with other teachers and subject specialists in the room		x	x			x	x			
7. Move about the room		x			x			x		

mentioned "being a guide or supporter"; furthermore, these teachers could not, in spite of persistent probing, specify what it meant to be a "guide" or a "supporter."

We would maintain that while it is appropriate to use the 12 general behavioral indices specified in Chapter Five to assess degree of implementation of the innovation, the catalytic role model must be reduced to more specific actions required of a teacher in attempting to determine how clear the innovation was to the teachers. If they had a clear conception of the innovation, teachers should have been able to answer questions such as "What are you expected to do when you act as a catalyst?" and "How would a catalyst handle this type of situation?" We reasoned that they would not have a clear conception of their new role in the classroom unless they were capable of specifying behavioral requirements at this level. In spite of our continual attempts during the interviews to get teachers to make statements about specific behavioral requirements of the catalytic role model with respect to their performance, we found that they could not talk about the new role in this manner. Instead, they usually described the innovation in terms of the pupils, perhaps in large measure because Williams' documents focused heavily on what pupils should be doing, and gave slight attention to what teachers would be required to do to get pupils to behave accordingly. Teachers talked about an "activity period" for the pupils or a "Comprehensive Classroom" for them. It is, therefore, not surprising that when they were asked, "After you first heard about the innovation did you feel you had a clear picture of what you were expected to do in carrying out the innovation?," nine of the ten responded "No."* Here are some typical responses when they were asked the follow-up question, "In what respects was it [the innovation] unclear?": (1) "At that time, and still, what methods would best implement it. . ."; (2) "It's unclear in most ways; how are you supposed to get a new idea across to children when he [Mark] didn't want us to call children together; I am unclear as to my role!"; (3) "How should the classroom teacher behave in this situation? The Brochure never spelled out the teacher's job!"; (4) "What is the teacher's role? Should she outline daily activities?; Should she spur children on?; Would the activity period be all or part of the day?"; (5) "At the meeting [when the innovation was announced] it wasn't clear whether he wanted a qualitative or quantitative change in education; I got no definite answer although I asked Williams directly, 'Do you expect, as a result of this program, more traditional excellence or different learning?' His answer was circular, non-direct. I assumed he wanted something."

The teacher (coded as teacher "8" in Table 6-1) who said she did have a clear picture of what she was expected to do described

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[*] The ninth said, "I guess so in terms of organizing the room, watching the children maybe, I guess I did, sort of. . ." However, later when asked if the innovation implied behavior Williams had not written down, she responded, "No! I think it's because I didn't know anything about it -- I couldn't have any idea until I tried it." Then when asked, "Did you think you could make the changes?" she replied, "Since I didn't know what it was, I could not know how to!" This teacher was, therefore, coded as a "No."

the new role in a manner similar to those who replied that they did not have a clear picture of it. When pressed for what one would do when acting as a guide (which was one of her responses) she said, "That's the question I can't answer!" Thus, the data indicate that no teacher in November had a clear picture of the catalytic role model in specific operational terms. Instead, they had a partial conception based on a few of its more general notions.

The teachers were also asked about how clear their conception of the new role model was just before they were requested to make their first efforts to implement the innovation by the administration. This was done in order to determine whether any changes had occurred in this respect between November and January. When asked, (after reviewing their statements about the clarity of the innovation in November) "As a result of what went on during this period (between its announcement and just prior to your first efforts) did your feelings change about the clarity of [what] you would be expected to [do] ?," eight of the ten teachers said, "No." A "no" respondent commented, "I still really don't have a clear understanding of the innovation, and I can assure you that I'm not the only one!" Two responded, "Yes." When we explored this matter with these two teachers through "probe" questions, neither could indicate a specific change in their conception of the innovation. We, therefore, concluded that there was no difference in the clarity of their conceptions of the innovations in November and at the end of January.

When we asked about the clarity of the new role model just prior to the assessment of the innovation, we repeated carefully and explicitly what they had said their conceptions of it were at the time of announcement. Following this they were asked, "In regard to what you are expected to do to carry out the innovation, do you feel differently now (about its clarity)?" Their responses are recorded in Table 6-2. Only two of the ten teachers said, "Yes." The others responded, "No."

Six of the eight, who said they were "no clearer," reported being unclear at the beginning. A typical follow-up statement to these "no clearer" responses was: ". . .it's still hazy, I still don't know how to act in this type of classroom. I am still hazy about what the role of the teacher in the classroom should be." Another said, ". . .they [the administration] were side-stepping the main issue; I don't think anyone has a clear idea of what the innovation is all about; no one, not even Williams, would let them [the pupils] come in and just move around after a couple of days. It's the vagueness of how far things should go, like the amount of noise in the classroom or the amount of noise on the stairs we should tolerate. Williams with his brain trust should have set up a room and had kids go into action and stay with them; they should do it, stop talking about it and do it. . . . He should have gotten more involved in classes; if a kid acted up and started punching and Williams said, 'That's OK,' then it would be clear; but, if he saw it in action, he might not like it."

Table 6-2. The Extent To Which Teachers Were Clearer About The Changes Required In Their Behavior By The Innovation Just Before The Assessment As Compared To Their Clarity When It Was First Announced (N = 10)

Original Clarity		Number of teachers responding just prior to the Assessment:	
		"Yes, clearer"	"No clearer"
Clear about the requirements when announced	(0)	-	-
Unclear about the requirements when announced	(10)	2	8
Other responses		-	-

The seventh teacher initially said, "Yes it is clearer," but then quickly added, "I think so, but don't ask me how!" Because she subsequently was not able to add anything to her original statement about her conception of the new role model in November, she was coded as "no clearer." The eighth teacher coded as "no clearer" also at first responded that she was clearer about the new behavior to be required, but she, too, was unable to specify in what ways she had a clearer understanding of the innovation. The ninth and tenth teachers coded as "yes, clearer" said that the innovation was less ambiguous as a consequence of their rereading of Williams' documents. However, their responses revealed that they had a clearer idea about the assumptions underlying the innovation such as "interest will lead to motivation to learn," and "primary school pupils do not have to be 'taught' how to read," but not about the role expectations for their performance.

To summarize: the data supported the conclusion that staff members were not clear in November (at the time of the announcement of the innovation) about the kinds of role performance required to carry out the innovation and that they were no clearer in January (just prior to their first efforts to implement it) or at the time of our assessment of its implementation in May.

Lack of Capability to Perform the New Role Model

The second circumstance that blocked implementation of the innovation was that teachers did not possess the capabilities needed by them to perform in accord with the new role model. By capabilities we mean skills and knowledge, not the capacity _to learn how_ to perform the new role. One possible way to determine their capabilities would have been to ask the teachers whether they thought they had the skills and knowledge needed to conform to the catalytic role model. However, we rejected this procedure for two reasons. First, the findings would be based on teachers' self-assessments and the accuracy of evaluations of this kind is problematic. Second, as noted earlier, the teachers did not have a clear conception of the requirements for their role performance, and, therefore, they would hardly be in a position to know what capabilities were required to perform the new role.

We used a way of assessing the capabilities of the staff that was based on the following rationale: the extent to which individuals possess the capabilities to behave in accord with a new set of specifications for their performance will be reflected in the number and kinds of problems they are not able to cope with in attempting to conform to it. Therefore, if teachers reported and we observed that they could not cope with a large number of problems, then we would conclude that they were incapable of performing the new role; if they reported and we observed few problems of this kind, then we would draw the opposite conclusion.

It seemed reasonable to expect that when teachers made their initial attempts to implement the innovation, they would encounter serious problems. If their capabilities increased over time, they could be expected to report fewer problems with which they were unable to cope during the later, than the earlier, phases of the period of attempted implementation. In the case of the innovation introduced at Cambire, the kinds of problems that we anticipated that teachers incapable of performing the new catalytic role model would report included the effective use of new materials, how to maintain pupil interest under a different basis of classroom organization, and how to foster pupil interaction. Our interviews with the teachers shed light on the extent to which they reported encountering these and a number of other types of problems during their innovative efforts. First, however, we present findings (Table 6-3) that show the number of teachers who reported that they were exposed to serious problems in their attempts to perform the new role at different time periods.

During our longitudinal interviews we asked the teachers whether they had encountered any serious problems when they made their first efforts to implement the innovation. All ten replied "Yes." Moreover, nine of the ten said that they failed to get the types of help and advice they needed at that time. We then inquired whether any of the earlier problems continued to exist subsequent to their first attempts, and nine out of the ten replied that "earlier problems had continued to persist"; nearly all of them added, parenthetically, that most continued. When asked whether new difficulties had arisen, seven of the ten responded, "Yes." Moreover, all ten teachers responded "Yes" to the question, "Did you need help or advice which you did not receive during your subsequent attempts to implement the innovation?" When asked if the problems they had encountered previously continued to exist for them at the point just prior to our assessment, all ten teachers replied, "Yes." When asked, "Which ones?" seven of the ten responded, "All of them."

Their informal remarks suggest the extent to which the problems they encountered persisted. One teacher said, "They are mostly continuations of original problems in varying degrees. Most of them do exist, some to a lesser extent, others to a greater extent." Another responded, "All the problems at the beginning have continued to exist today -- especially discipline!" A third commented, "All of 'em do; I want to know, how are you supposed to motivate a child in this type of classroom so that he will automatically do work without having to chase him?" A fourth exclaimed, "All of them: discipline, evaluation, motivation; children seemed to have lost the ability to sit and work on assignments by themselves for any period of time, how do you get them to do this?" A fifth teacher in retrospect said, "I never was able to instigate [sic] enthusiasm in these kids while keeping the noise level down, and I never knew how to get them to use their time for learning instead of playing. The children were beginning to abuse freedom; they wouldn't do any work; they wouldn't record what they had done; many became discipline problems who weren't in the beginning. I just didn't know what to do."

Table 6-3. Responses Of The Staff To Questions About Whether They Faced Serious Problems During Their Innovative Efforts (N = 10)

Question Asked Teachers	Number of Teachers Responding: Yes	No
1. At the beginning did you find any serious problems in trying to carry out the innovation?	10	-
2. Was there any help or advice that you needed during the period when you made your first attempts which you didn't get?	9	1
3. Have any of the problems arising during your first attempts (to implement the innovation) continued to exist?	9	1
4. Have any new problems arisen?	7	3
5. Has there been help or advice that you have needed that you haven't gotten (during your subsequent attempts to implement the innovation)?	10	-
6. Do any of these earlier problems continue today? (just prior to the assessment) . . .	10	-

Table 6-4 presents the number of teachers who reported that they had been exposed to specific kinds of serious difficulties during their efforts to implement the innovation. All ten teachers indicated that maintaining discipline had been a serious problem. They said that pupils fought over desks, materials, and for personal reasons. Nine of the ten reported that the pupils did not appear to be learning very much; they felt that large numbers of pupils were "wasting their time," "just playing around with the materials," or "not making efforts to learn something from the materials," and that they did not know how to cope with this problem without "requiring children to learn" or without restricting their freedom. A large majority (8/10) mentioned related problems: difficulties in keeping pupils interested, motivated, and pursuing their own interests and in getting other pupils to help those having learning problems. Most reported that large numbers of the pupils were continually demanding "direction" from them. Others were at a loss as to how one applies "subtle coercion," a term used by Williams, to describe the teacher's expected performance in relating to pupils who would not work on subjects and in areas in which they were performing inadequately. Put another way, teachers found that many pupils continued to do only those things that they did well, and they were perplexed about how to get them to do other things without "forcing them." One teacher said, "How are you supposed to guide a child to work on skills or subjects with which he is having trouble but without requiring him to do so?" Other

Table 6-4. Serious Problems Staff Members Reported They Encountered In Their Efforts To Implement The Innovation (N = 10)

	Teachers Responding Affirmatively:									
Serious Difficulties Arising:*	1	2	3	4	5	6	7	8	9	10
1. Pupil discipline problems (ineffective child interaction)	x	x	x	x	x	x	x	x	x	x
2. Minimal pupil learning	x	x		x	x	x	x	x	x	x
3. Lack of continued pupil interest and motivation	x	x	x		x	x	x	x		x
4. Pupil misuse of materials	x	x	x	x		x	x	x		x
5. Minimal awareness of the ways of using materials to encourage pupil learning	x	x	x		x	x	x	x		x
6. Insufficient contact with all pupils	x	x	x	x				x	x	x
7. Ineffective interaction with partner in room		x		x	x	x		x		x
8. Inability to evaluate effectiveness of personal behavior during this period		x		x	x	x	x			x

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*Difficulties presented in order of frequency of teacher's reporting them.

teachers mentioned that there were many pupils in their classrooms who would not spend any period of concentrated effort working on anything that the teachers considered educational, in spite of their efforts to influence these pupils.

A large majority of the teachers (8/10) were disturbed by the extent to which pupils were not "caring for" the available instructional materials. Several were upset about stealing, others about waste, and still others mentioned deliberate destruction of materials and failure to return them to where they were obtained so that the next user could find them easily. Eight of the ten teachers also reported that they did not know how to make effective use of the materials that were available for educational purposes. This was mentioned as a particularly acute problem by the primary classroom teachers. How were they supposed to help pupils to learn how to read and do math without giving them any instruction? Seven of the ten teachers were very concerned with the problem of inadequate contact with the pupils. Most maintained that they were not able to "keep on top of all children," "to know what they're doing, and what they are learning." Their expression of concern about their inability to be able to get around to all pupils was usually followed by the statement that "there are just not enough people in the room to do this job." Furthermore, a majority of the teachers also noted that they had difficulties in developing an effective working relationship with the other teacher in their room. The major source of these problems, the teachers reported, was conflicting ideas about what constituted "appropriate" classroom activities. Finally, a majority of the teachers indicated their uncertainty about whether what they had done during their innovative efforts had any positive effects on the pupils. Many teachers complained that "nobody ever tells me whether what I am doing is right or wrong!"

Of the eight problems presented in Table 6-4, eight teachers mentioned at least six of them. One teacher mentioned five, and only one mentioned as few as three of them. In addition, teachers discussed other difficulties but with less frequency: three were concerned with the ineffective way rooms were set up; five indicated that they were having trouble restraining the class from continually making an overwhelming amount of noise; three reported uneasiness about determining the appropriateness of available instructional materials.

The findings, in short, indicate that teachers faced serious difficulties with which they were unable to cope at the time of their first efforts to implement the catalytic role model and that these problems, plus new difficulties that arose later, were in evidence at the time of our assessment of the innovation. We, therefore, concluded that the staff never developed the capabilities to perform according to the new role model.

Unavailability of Necessary Materials

A third circumstance that served as an obstacle to the implementation of the innovation was the unavailability of the necessary instructional materials. As noted earlier, Williams' conception of the innovation* specified ". . .transferring as much of the instructional and 'motivational' responsibilities as possible from the teacher to the total classroom environment -- and to the greatly enhanced. . .materials with which the rooms should be filled." He also stated:

> . . .we would like these materials to be such that they can generate the intrinsic interest of the children and thus relieve the teacher of much of the need to 'motivate' children. In addition, we would hope that many of the materials can be self-instructional, that they can be used by students with a minimum of guidance from the teachers. . .If the teacher has adequate assistance and adequate amounts of high-quality, self-instructional materials, perhaps she will have a great deal more time to spend helping individual students who need her attention while other students can progress at their own speed and largely on their own.

The Director thus maintained that in order for teachers to act as catalysts, they must make available to their pupils curriculum materials that are "highly motivating" and self-instructional in nature for two reasons: first, in order to "free" the teacher from group instruction, and second, to permit the teacher to act as a catalyst in relating to the pupils. To what extent were these necessary, "highly motivating, self-instructional" materials available in the classrooms to teachers?

The question of available adequate materials is really double barrelled: Are the materials available to teachers, in fact, highly motivating and self-instructional? and Are there enough to go around?

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* See Appendix B-3, January Document, pp. 344-345.

If "highly motivating" refers to the quality of the materials in terms of their ability to hold a child's interest and attention for relatively long periods of time while he progresses in his learning, then clearly such materials did not exist at Cambire. The teachers stressed that one of the basic problems they faced was that pupils were not spending adequate time with materials nor learning very much in connection with them. "Self-instructional" can mean materials which allow a pupil to learn through his own efforts and to advance through a set of progressively more difficult learning stages. It can reflect something less impressive: that a pupil can learn something from such a set of materials, although what that something is may not be apparent prior to the learning experience. Indeed, if one uses this latter definition, it is apparent that any set of materials can be viewed as self-instructional.

We now examine two lists of "available materials," with these two conceptions in mind, one for a primary class and one for an intermediate class* that were in the classrooms at the time the teachers first made efforts to implement the innovation. The primary list consisted of the following kinds of materials in reading: independent work sheets, word games such as "Spill and Spell," vocabulary flash cards, riddles, a set of telephones, and library books. For mathematics, there were Cuisenaire Rods, an abacus, Count the Beads, a scale, math card game, math flash cards, and a printing set for numerals; for art the available materials consisted of paper and various media like crayons and water paints; and for writing, a typewriter was available.

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*With a few minor exceptions, the amount and types of materials seemed to be the same within the primary grades and within the intermediate grades.

The intermediate list contained the following types of materials in reading: a controlled reader, the SRA Program, work sheets, flash cards, Scrabble, Probe, Password, Anagram, and paragraph puzzles. For mathematics, work sheets, controlled reader, flash cards, Solitaire, "21," Concentration, Bingo, and a T.M.I. Grolier machine for fractions were available. For science, there were microscopes, mirror cards, pendulums, mystery powders, batteries and bulbs; and in social studies the following materials were in evidence: Geography Lotto, Wide World, map clue sheet, and a globe.

Most of these materials represent the type of supplementary materials that could be found in a well-stocked suburban elementary school. It seems doubtful that they represent instructional materials that would permit a pupil to progress very far in a meaningful way on his own, that is, without instruction from the teacher.

What about the quantity of these materials available to teachers? Eight of the ten teachers complained bitterly that the amount of curriculum materials placed at their disposal at the time they made their initial efforts to implement the innovation was inadequate.

During the period between the time of the announcement of the innovation in November and just prior to its assessment in May, administrators and staff, independently and in concert, frequently commented on the inadequacy of the available instructional materials in terms of both their quality and quantity.

When we questioned Rudy just after the announcement of the innovation, he observed:

> The whole idea of the teaching process is an important goal. . .the big problem is getting the proper materials. . .

Early in December we asked the teacher who had unofficially been designated to be the first to carry out the innovation, "When do you think you'll try. . .I'd like to visit. . .?" She replied (angrily):

> At this rate I'll never get it going, I just don't have the materials and they can't get the money through the regular channels for it. . . .

At an afternoon staff meeting early in January, discussion centered on helping this teacher prepare for her first effort. The "lack of materials" theme permeated the discussion:

Rudy: "What do you envisage might happen on Monday?"

Faith (very concerned): "I'll tell them what to do, what materials they should use, but I need materials. . . ."

A subject specialist then noted:

> I think we probably have enough materials for one day. After you've tried it Faith then we can decide better what we'll need in the future. . .

Near the end of the meeting Rudy asked Faith, "Do you think we have enough materials?" She responded, "Yes, I think I'll have enough for the one day. . . ."

During the period when teachers were making their first efforts we had a conversation with Williams about his conception of the innovation. He noted that "the right kinds" of materials were not available at Cambire. In his words, ". . .I'd expect to see corners [in each room] with the same kinds of materials, say for science, math, art, reading, and children in these corners working independently or in small groups -- lots of self-instructional materials, but these are hard to develop." Later in a conversation with Mark he observed: "We have noticed a number of problems with materials, finding materials that kids can really work with on their own. . . ."

In a private document he submitted to the Bureau of Educational Change, a subject specialist made the following comment:

> At this point I would have to say that some teacher-directed activities appear to be essential. This is perhaps a reflection of both our knowledge of the ways children learn and of the kind of curriculum materials which are presently available. . . . It has been suggested that the quality of the materials is an important factor. We must seek games, toys, and other kinds of equipment which are open-ended in nature, which stimulate thoughtful exploration and which are innately attractive to pupils. In evaluating the potential effectiveness of materials, we should always consider their value in terms of the tool skills and operational competencies which can be developed through their use. Selection and use of materials should be one of the primary topics explored in this coming summer's program. . . . A danger inherent in attempting to establish the Comprehensive Classroom is falsely equating quantity of materials with quality.

We have presented evidence obtained at different points in time during the period of implementation from the teachers, subject specialists, and the administration about the instructional materials available to the teachers in the Cambire School. This evidence supports the following conclusion: the quality and quantity of materials required for teacher implementation of the catalytic role model were not available during the entire period of attempted implementation, beginning with the announcement of the innovation in November and continuing through the six-month period that ended at the time of our assessment.

Incompatible Organizational Arrangements

The fourth circumstance that constituted a barrier to the implementation of the innovation was the existence of organizational arrangements that were incompatible with the catalytic role model. At Cambire, at the time of the announcement of the new role model, three practices existed which were incongruent with the new role model and, therefore, required alteration: the rigid scheduling of school time, the assignment of pupils to classrooms according to age, and the use of subject-oriented report cards.

As we noted at the end of Chapter Four, the school just prior to the announcement of the innovation was departmentalized, which meant that different teachers were required to direct the learning of groups of pupils in specific subject areas during particular periods of the day. This practice needed to be changed if the innovation were to be implemented because the innovation required that teachers allow pupils in their classes to pursue their own interests throughout the day.

At the time of the announcement of the innovation the school also engaged in the practice of grouping pupils on the basis of their age. If teachers were to "act as a catalyst between children and promote the teaching of children by children," then a different basis for grouping the pupils was required. Creating classrooms with pupils of varying ages is especially important in connection with pupils in primary school learning how to read as is indicated by the following excerpt from a description of a school in an English county in which an innovation similar to the one at Cambire had been introduced:

> . . .a lot of rich material is needed, according to the teachers, but the best stuff is often homemade. . . . A child might spend the day on his first choice, or he might not. . . . How they learn reading offers a clear example of the kind of individual learning and teaching going on in these classrooms. . . . At first it is hard to say just how they do learn reading, since there are no separate subjects. A part of the answer slowly becomes clear, and it surprises American visitors used to thinking of the teacher as the generating force of education: children learn from each other. They hang around the library corners long before they can read, handling the books, looking at pictures, trying to find words they do know, listening and watching as the teacher hears other children's reading. It is common to see non-readers studying people as they read, and then imitating them. . . . A very small number of schools. . .have adopted what they call 'family,' . . . grouping, which further promotes the idea of children teaching children. In these schools, each class is a cross-section of the whole school's population, all ages mixed together. . . . older children help teach the young ones to clean up and take first steps in reading. . . . (Featherstone, August 19, 1967, pp. 18-19)

At the time the innovation was announced, the school used a report card system that required teachers to "give grades" to each pupil for his mastery of different skills and subjects. However, the innovation specified that teachers should focus on the process of learning and the "operational competencies" involved, such as defining problems, organizing evidence and information, comparing and differentiating phenomenon, and developing hypotheses. The report card system, therefore, required alteration if teachers were to be expected to encourage these new types of learning in their pupils. However, the old report card system was retained. The impact of failure to abandon the old system upon the implementation of the innovation is suggested by the following incident. In a routine manner Rudy announced at the April 3rd staff meeting "report cards are due the 10th of April." Many of the teachers looked somewhat uncomfortable; Stan gave out a loud guffaw. Later a teacher confided, "We are using the old report cards, if I were really carrying it out [the innovation] I'd have no basis for grading; I'd have to 'use' the old card but would grade on involvement and interest. . . ."

To what extent were the other two school practices that were incompatible with the innovation at the time of its announcement altered? At the end of January there was a return to self-contained classrooms unencumbered by a tight classroom schedule. However, a school schedule that included the following practices remained and was present at the time of the assessment: all pupils were kept out of the building in the morning until the 8:30 bell rang and released in the afternoon by the 2:20 bell; a second bell rang in the morning before classes began. Bells were also rung for recess and lunch; all classes were expected to participate in recess from 10:30 to 11:00 and lunch from 12 to 12:30 as evidenced by the distribution of milk to all classes just before noon. Teachers were expected to adhere closely to this schedule. Pupils were taken in groups to lavatories at lunch and recess; they were required to walk up and down stairs in single lines, and were dismissed at the end of the day in a similar fashion. Moreover, pupils were required to participate in certain types of activities, regardless of their interests. These included reading in the morning, art, music, sewing, gym, and field trips. The continuation of these school practices served to block, as did the full departmentalization plan, the implementation of the catalytic role model by teachers.

Although the innovation specified that teachers should encourage the teaching of pupils by other pupils, the practice of grouping pupils, homogeneously, on the basis of their ages was retained throughout the period of attempted implementation of the innovation.

In short, two of the three organizational arrangements that required changes to make them compatible with the new teacher role model were never altered during the period of implementation, and the third although adjusted to some extent, was still restrictive to a considerable degree. Thus, we concluded that incompatible aspects of the environmental setting that existed at the beginning of the period of attempted implementation and that were never altered, constituted a major barrier to teachers' efforts to carry out the innovation.

Lack of Motivation to Make Efforts to Implement the Innovation

The fifth circumstance that constituted a major obstacle to the implementation of the catalytic role model by teachers in May was their lack of motivation to expend the time and effort required if it were to be successfully carried out. We shall consider first the initial response patterns of the teachers to the announcement of the innovation in November, 1966, and then examine their willingness to make efforts to carry it out in November and in May, 1967.

Our interviews with the teachers revealed that they had varied and mixed reactions to the innovation when they first heard about it. Three of the teachers had general reactions that could be classified as positive, three as essentially ambivalent, and four as somewhat negative. Table 6-5 contains a cross-classification of the teachers, categorized on one hand by their general feeling toward the innovation, and on the other, by their reactions to a number of its specific dimensions.

The findings reveal that nine of the ten teachers reported that they agreed with the objectives of the innovation. As one staff member put it:

> I don't think you can disagree with the objective that we want to make thinkers out of the kids. We want to make them enjoy school, we want to make them intellectually more powerful, we want to give them a better self-image. I would say I definitely agree with his goals.

Table 6-5 also shows that all of the teachers felt that there was a need for basic changes in the operation of their school.

Table 6-5. Selected Factors Associated With Teacher Variation In Initial Response Patterns To The Introduction Of The Innovation (N = 10)

	Teachers with Initial Positive Response			Teachers with Initial Ambivalent Response			Teachers with Initial Negative Response			
	1	2	3	1	2	3	1	2	3	4
1. Need for Basic Change at Cambire	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2. Need for This Change	Y	AMB	Y	Y	AMB	Y	N	AMB	N	N
3. Perceived Priority of:*										
Director	E	E	E	E	E	E	DK	E	E	G
Assistant Director	M	M	M	G	E	N	DK	N	L	E
Subject Specialist A	E	M	M	DK	DK	DK	DK	N	L	L
Subject Specialist B	E	M	M	DK	M	DK	DK	N	M	M
"Downtown"	DK	DK	DK	L	N	DK	N	N	N	N
4. Perceived Workability	Y	Y	AMB	DK	AMB	AMB	N	N	N	N
5. Agreement with Objectives	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
6. Perceived Capability	Y	Y	Y	Y	DK	Y	DK	Y	Y	N
7. Perceived Consequences:										
Positive for self	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Negative for self	Y	Y	N	Y	N	Y	Y	N	Y	Y
Positive for students	Y	Y	Y	Y	Y	Y	N	N	N	Y
Negative for students	Y	Y	AMB	Y	Y	Y	Y	Y	Y	Y

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* Code: E = Extreme; G = Great; M = Moderate; L = Little; N = None; DK = Do not know. For all remaining: Y = Yes; N = No; Amb = Ambivalent.

The four teachers classified as having negative responses to the innovation at the time it was announced held the belief that it was not very practicable or feasible for Cambire and that it would not be beneficial to the pupils. As one of these teachers put it:

> Children are supposed to have maturity and discipline which they need in order to do the required stuff; I think they needed a more traditional classroom. . . .

It is not surprising that three of the four teachers who maintained that the innovation would not work at Cambire anticipated no positive consequences for pupils and all four of them saw negative consequences for them. While some of the "positive" and "ambivalent" teachers reported anticipating some negative effects on pupils, all of them believed that there also would be positive consequences. Although each group contained teachers who perceived negative consequences for themselves, only the "negative" group included teachers perceiving no positive effects for themselves. These findings suggest that the teachers' initial reactions may have been partly the result of their comparisons of the anticipated positive and negative consequences for self and for students.

Another finding of interest in Table 6-5 is that the "negative" group perceived the top echelon of administrators as giving a lower priority to the innovation than the Director. In fact, all four of these teachers believed that the central administration gave no priority to this innovation at Cambire. In addition, most of the teachers perceived that the Assistant Director placed less priority on the innovation than the Director. The only teacher who believed that the Assistant Director placed more priority on it than the Director said, "Rudy is actually doing more than Williams; because he wants to please Mark he puts more emphasis on it than Williams."

It is especially important to note that all the teachers, even those who were classified as "negative," reported a willingness in November to make efforts to try to implement the innovation.* As one of the teachers who was classified as "negative" put it:

> Williams came down. . .and wanted to see our reactions, he expected arguments. He was surprised when he saw we were all willing. . . . We figured that if he wanted it, let's give it a try. . . .

We found, however, that at the time of our assessment the situation with respect to the teachers' willingness to make efforts to implement the catalytic role model had changed drastically. Teacher responses to questions in the formal and informal interviews revealed that strong resistance had developed to making efforts to implement the new role model. The following comments of teachers, obtained just before and during the period of our assessment, reflect the unwillingness of the staff to devote time and effort to the innovation. One teacher expressed her feelings this way, "Sometimes I am really negative, at other times I am just confused; I just don't see anything positive coming out of it!"

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*Our data provided no support for the widely held notion that teachers are generally resistant to changes introduced by their administrators. No teachers indicated their resentment of the fact that the innovation was introduced in a unilateral manner by their superiors. What they did resent was the lack of follow-up by the administration once the innovation had been announced. Thus, the evidence leads us to conclude that the pattern of initiation "from the top," that is, by the Director, did not have any apparent impact on the initial reactions of teachers to the innovation at Cambire.

Another said, "As a result of the way things have been run around here, I am really doubtful; it needs a lot of rehashing, discussion, communication between teachers; it needs organization, both general and specific, about details of the classroom, timing, organizing the teachers' time, getting used to materials. If these things aren't done, I am skeptical. . . ." A third put it this way, ". . .I have to admit that I really feel less willing and maybe (pause) well I am failing to make as much effort as I was in the past because of my doubts about the assumptions and values implicit in this innovation and also the effect of this thing on the kids when you let them go. . . ." A fourth commented, "I wonder whether it's worth the effort one has to put into it [the innovation] . . . . I can't really tell how much they're learning nor how many are learning. . . ." A fifth divulged the following, "I'm just getting tired; I can't take it with the kids anymore; I can't see what good it's [the innovation] doing; it's not worth the effort. . . . I go home and I've got a headache; I bite my nails; and why should I do anything if it's not appreciated? Why should I go home and work myself to the bone preparing and not even getting the slightest acknowledgement of appreciation?" A sixth complained, "Why bother, I'm not coming back, I'm just going to settle back and let August ease on in; if they don't act up in class, I'll let 'em [the pupils] do whatever they damned well please -- Williams is using us, and I'm not going to 'break my ass' now that he doesn't want me back!" A seventh left little doubt about his feelings, "The kids aren't taking to it so why go home and plan these things, and also I don't feel like doing anything because of the raw deal and the run around we're getting from Williams. . .I don't like his idea, I don't think it will work. I question his assumptions about interest and self-motivation for these kids; maybe for a gifted class it's OK but most of my kids are around 100 I.Q." An eighth teacher reacting to the lack of discipline in children which she felt was caused by their response to the innovation exclaimed, "The kids are getting really fresh now. . . . Yesterday I had to go home and take two tranquilizers. The worst class is the second grade. . .; what one child said to me I couldn't repeat. . . . I really hated coming to school today; I am sick of this place. . . ." After a brief absence from school, a ninth teacher noted sardonically, "Ya know, I was sitting home the last two days saying that it can't really be that way, and that this school can't be as bad as I think it is; then I came back. Ya know, it really is that mixed up, confused, and nutty!"

The data, in short, revealed that in November the staff had mixed reactions to the announcement by the Director of the major innovation and that while some teachers were positive, others somewhat negative, and still others ambivalent in their responses to it, the teachers were willing to attempt implementation of the catalytic role model. By the time of our assessment in May, however, we found that a noticeable shift had occurred in staff willingness to devote time and effort to trying to implement the innovation. Resistance to making efforts had developed during the period of attempted implementation and was in strong evidence at the time of our assessment.

Summary

We have now answered the second major question of our inquiry: What circumstances explain the minimal degree of implementation of the catalytic role model that we observed six months after it had been introduced to the school? The findings presented in this chapter showed that five basic factors accounted for the minimal implementation of the organizational innovation at Cambire at the time of our assessment in May: the teachers' lack of clarity about the innovation, their lack of needed capabilities, the unavailability of required instructional materials, the incompatibility of organizational arrangements with the innovation, and the lack of staff motivation. Moreover, the findings revealed that the first four factors existed at the outset and persisted throughout the period of attempted implementation whereas the fifth, lack of staff motivation, developed during the period between the announcement of the innovation and our assessment of its implementation.

In the next chapter, we turn our attention to the question, what accounted for the existence or the emergence of these barriers to the implementation of the innovation?

Chapter 7

OBSTACLES ENCOUNTERED BY TEACHERS: ROOTS OF THE DIFFICULTIES

The data presented in the preceding chapter revealed that five major barriers to the implementation of the catalytic role model were in evidence at Cambire at the time of our assessment in May. Furthermore, our findings showed that four of these barriers existed throughout the period between the announcement of the catalytic role model in November, 1966, and our assessment of its degree of implementation in May, 1967, while the fifth developed during this period.

What accounted for the continued existence or development of these barriers during this period of attempted implementation? More specifically, (1) Why did the staff never receive a clear conception of the new role requirements for their performance?; (2) Why did the staff not develop the capabilities needed to implement the innovation?; (3) Why were the instructional materials essential to the implementation of the innovation never made available?; (4) Why were organizational arrangements that were incompatible with the innovation never modified?; and (5) Why was there a sharp decline in staff motivation to make efforts to implement the innovation? In this chapter we examine data that emerged from our case study that bear on these questions. However, before considering them, it is necessary to present a brief chronology of the major events that occurred between the announcement of the innovation at

Cambire and our assessment of its implementation in May that are of special relevance to the several issues to be considered.

At the end of November, 1966, copies of a ten-page document about the innovation were passed out to teachers and subject specialists. At a meeting, shortly thereafter, Rudy presented the idea of the new role model to the staff in Mark Williams' presence. This was the first effort to bring the innovation to the attention of the teachers. In the middle of January, 1967, Faith Bailey made the initial attempt to implement the proposed change. Later in the month copies of an expanded version of the earlier document were distributed to the staff. At the end of January the departmentalized organization of the staff, initiated in October, was discontinued; the self-contained classroom was reinstated, but now each room was double-staffed with either two regular teachers or a regular teacher and a practice teacher from a nearby university. Teachers at this time were "urged" to make efforts to implement the innovation.

In the middle of March, Rudy officially announced that he was leaving Cambire the next month to take over the principalship of a school in the "regular system." Teachers received forms in the latter part of March to reapply for their positions at Cambire next year and simultaneously were given forms to apply for a transfer to other schools in the regular system for the following year. At the beginning of April the first wave of three student teachers left the school and another set arrived. Just before spring vacation,

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in the middle of April, Rudy left the school. After spring vacation John Helman, a subject specialist, took over as temporary head of the school. Our classroom assessment began April 24 and lasted through May 12, 1967.

We now turn to an examination of those conditions that appeared to account for the continued existence, or development, of the barriers to the implementation of the catalytic role model at the Cambire School.

Lack Of Clarity About The Innovation

We have seen that the staff at Cambire, between November and May, never developed a clear picture of the role performance that was expected of them with respect to the innovation. What accounted for this state of affairs?

The teachers were unfamiliar with the innovation before its announcement in November and their first exposure to it occurred when they read the November document. What did it say about the innovation? It contained a very general statement of its purposes and a brief discussion of the physical layout of the classroom and what the children would be doing in it. The document discussed in vague and in the most general of terms what was expected of teachers; it did not specify precise types of role performance teachers should engage in to obtain the "desired behavior" from their pupils.

Our evidence indicates that the teachers' ambiguity about the innovation was not recognized or dealt with by the administration in November or later. A number of teachers expressed the sentiments indicated in the following comments of two members of the staff:

The first noted, "Williams was there at the first meeting, but he didn't say anything"; the second stated, "We didn't talk about it very much. This was Williams' philosophy, this is what he believed. I took it [the document] home and read it." We asked teachers whether at the time of the announcement of the innovation they believed that Mark and Rudy had really thought it through carefully and had specific plans for putting it into effect. To both questions all the teachers answered, "No." Their informal remarks reveal their perceptions of why these conditions prevailed. One teacher commented, "Williams has no classroom experience so he can't think it through; his philosophy is that it's an idea that the teacher has to work out." Another said, "Williams knew where he wanted to go; he had a diagram of the room, but he didn't know how to get there; outside of this, no more." A third teacher stated, "The document was all jumbled up and it wasn't clearly presented." One subject specialist said, ". . .Williams wanted a materials oriented classroom, where kids should have a choice. He wasn't too clear about it; Rudy wasn't clear either about what Williams wanted. Rudy 'sat' on the innovation; he didn't tell us much." When another specialist was asked, "Did you get the impression from the way it was first proposed or announced that Mark and Rudy had really thought this thing through carefully?," he replied:

> I think this was a vague idea of a type of classroom that Mark would like to see. . . . He was speaking in generalities. . .

> and we didn't get down to specifics before we tried to put this into operation and really talk about what we would like to see going on in classrooms, what the teachers' role would be; I think more preparation should have gone into this, for my part as well as everybody else's. . . . I think the only plan they had was that we were going to have a variety of materials in the classroom and the kids would be given the freedom to choose what materials they would like to work with, and then the teachers would walk around the room, doing what, I'm not sure; I don't think Mark made it very clear. . . .

We also asked the teachers about the activities they had engaged in with respect to the innovation between November and the end of January, when they made their first efforts to implement it. Most teachers indicated that they had given the innovation considerable thought during this period. Their responses revealed that they had primarily thought about the types of instructional materials that would be required for the innovation and how students would react to it. A typical response was, "I thought about everything, for example, how you'd set things up; how to program it; would they [the pupils] be free all day?; how much materials you would need; how would you control the children? There were so many things." For most teachers, the extent of their reading about the innovation was limited to the documents prepared by Williams. When questioned about discussions of the innovation they had held, most teachers reported talking, either informally or formally, about it at staff meetings and that the nature of the discussion usually revolved about child discipline problems or the paucity of curricular materials. One teacher said, "Unfortunately talking was done in bull sessions; we never came up with a guide for future actions. . . ."

When asked if he had any serious questions he said, "Whether it was planned well enough; someone might have done it before somewhere; we should know. I am sure there is information, but it hasn't been provided [for us] yet!" Another said, "I talked a lot [to administrators], but thought more. . . . I wanted to know why and where it had been tried; I wanted to know if it had been tried anywhere else."

The subject specialists were more detailed in their discussions of Rudy's activities. One commented:

> I don't know, you'll have to ask him; he was more concerned with the daily handling of the school. He had to do this, he had lost his Assistant Principal (Phil Jackson) so he was busy entertaining visitors; he says he wrote reports to Mark; I didn't see them, so I don't know what he said.

The other, equally critical, said:

> Rudy came back [from a session with Williams] with a drawing, but there was no real communication. Either Williams wasn't communicating or Rudy wasn't communicating it to us. I knew that whatever happened at BEC meetings we weren't getting the information. He would tell us only what he wanted us to know. It was being discussed somewhere because Tanner and Aldem [assistants at BEC] seemed to have some knowledge about it. Rudy made a mystery about everything. . . . Williams should have read his statement to us, spent a week or two with us just discussing questions and answers; notes should have been taken and at the end of this period a summary set forth in which Mark said, ' I want certain things done or there is nothing I want done.'

When asked whether they really tried to raise questions about the innovation with either Mark or Rudy, the responses presented here were typical:

> No, there wasn't enough time given our schedules; too many bull sessions. . . .

> Not with Mark, because he wasn't there; not with Rudy, because

> he didn't have the answers; no one had the answers because they didn't do their own research work on it!
>
> I don't think they knew how to resolve them!
>
> Their lack of knowledge wouldn't permit them to answer my questions.
>
> If we asked them questions at the meetings, they always let things go up in the air, do it yourself, try it out! Everything was so indefinite. . . .

The subject specialists responded in a similar vein when asked why their questions were not handled effectively. One said:

> We needed experience to get some answers, we didn't have any answers yet,. . .if we are basing this on Leicestershire, then I should have gone to see what they were doing; they should have done what we will be doing next summer [bringing someone over from England with experience].

Staff members were asked whether the administrators tried to find out what their feelings were about the innovation. The majority said that the administration did not try to ascertain their feelings. One "yes" answer was followed by, "They asked us what we thought of the catalytic role model and if we had any plans. . . ." One "no" answer was followed by, "I don't think so at all except at the first meeting; they asked, 'What did you think of the idea?'; this was in respect to Williams' booklet." Another said, "No, aside from a perfunctory, 'What did you think of it?'"

The observer's field notes revealed little efforts on the parts of teachers to obtain a clearer image of the innovation during December or early January. For example, discussions in the teachers' lounge seldom touched on the innovation and when it did it was usually with respect to (1) Can you give a child such freedom? or (2)

Can we get the materials? This lack of effort by teachers to get clarification can also be explained by their understanding, which resulted from the meeting in November, that Faith was the one informally designated to try the innovation first.

We also asked the teachers questions about the activities of the Director and Assistant Director related to clarification about the innovation after the teachers made their first efforts at implementation, that is between January and May.

In describing Mark's activities most teachers indicated that he had been of slight or no value in this respect. The following remarks were typical: "Very insignificant"; "I don't know what he does up there"; "I don't know of anything -- he came to a few meetings, maybe once a month"; "I don't have any idea"; "Mark? Nothing"; "Williams came down once in December and January and wanted to see our reaction"; "We didn't see him that much -- he was kind of vague when we did see him, he never commented on our activities"; "Once he came with the Superintendent of Schools; his activities were limited to giving the documents out; he came into the room, kids would flock around him; he was very happy; but, he didn't contribute anything." One subject specialist noted, "He wrote up his description and assumptions for the catalytic role model, but there was no communication after that"; another said, "Other than mentioning it once to me, nothing I know of!"

Rudy's activities in connection with clarifying the innovation during this period were seen as somewhat more varied, but still minimal; as one teacher put it, "He conducted meetings and presented us with lists of materials that were available"; another said, "looked for materials, ordered materials, asked my opinion; he was a big help, he left the plans for the innovation up to me." A third reported, "Rudy? Nothing!"

A fourth teacher commented, "Gault was always asking what kinds of equipment *we* thought we would need; he would search through books, and he would try to get them"; a fifth reported, "Asked for lists of materials *we* thought might be useful in carrying out the innovation; he ordered some of them. In the meetings we talked about projects already in process and a little about our reactions to Williams' objectives."

A sixth teacher, in an unenthusiastic tone of voice, offered, "Not much, we had meetings and we discussed certain things; he'd pass out certain things he read in magazines; he would always say we were doing a wonderful job."

What were the administrators' views about the staff's clarity concerning the innovation between February and May? In answering a question about how clear he thought the innovation was in the minds of the teachers, subject specialists, and Assistant Director, Mark revealed in February of 1967 that *he* was not clear about the specific behavior that the new role would require of teachers. When he was asked, "How clear do you think the innovation is in the minds of the teachers and Rudy?," Mark replied:

> Different teachers have different ideas; therefore, the innovation can be different in some ways to different teachers; but, I felt that when this was first presented the objectives were clear to everyone. . . . I can't say the same for the plans for doing it. . . . Here, all of us will have to find out what we are talking about. . . .

His answer to a question about the source of the innovation also indicates his lack of clarity about it:

> Oh, we sort of robbed Bruner; we robbed everybody. . .we had all sorts of hypotheses that if you create this kind of environment you will get kids to read better and read more, and you will get them going on interesting and really fascinating topics; and to some extent you can sort of subjectively test this out at least in that you do find yourself continually in situations where you can't supply what a kid wants and that's very bugging; and I don't know what the answer is to how to keep kids going and how to get yourself in a situation where you can supply exactly what a kid wants just when he wants it. . . .

Rudy's view of the clarity of Mark's documents during the months following their introduction in January was:

> . . .actually how you go about it, was our job. But, his job was what the philosophy should be. . . . You must understand that he would admit to us that he didn't have all the answers. He wasn't sure that it was going to work, and he didn't know where we were going to get this manipulative equipment; getting those materials experts in there was one attempt at trying to get some. . . . He was heading in that direction without having all the answers, too.

Rudy, himself, during this period was uncertain about what would be required of teachers in performing the new role:

> . . .I had heard about permissive classroom situations, but it didn't include the idea of children being free for almost the total day. . .; I was very worried about reading and math. I wasn't quite sure how they would fit into this. . . .

In addition, both Mark and Rudy held the belief that "really creative" teachers could "discover on their own" what the appropriate role performance of the teacher would be as they attempted to conform to the catalytic role model. Mark stated:

> What I want are top teachers, not regular teachers who have to be dragged along. . . . The introduction of these new materials and the Tuesday afternoon activity period was all done as part of a strategy of treading water and building confidence in the teachers. . . . What we have wanted is a bunch of really creative, innovative teachers and administrators who could eventually take this idea and make something out of it. . . .

Rudy noted that he felt the type of teacher "required" for this innovation was missing at Cambire:

> . . .there was a professional kind of a requirement which I didn't see in some of those people. I think you had to be bright!. . .dynamic!. . ., well-read and interested!. . ., imaginative! and it wasn't enough to say, what do you want me to do? This kind of a person doesn't belong in the innovative school. The kind of person needed is the one who makes things happen. . . .

To summarize: during the period between the time of announcement and just before the teachers were "urged" to try to implement the innovation at Cambire, there was a failure to clarify the ambiguities teachers had about the catalytic role model. The November document contained only a general statement of the aims of the innovation and described it primarily in terms of the physical layout of the classroom and the behavior to be expected of pupils. It glossed over the standards to be applied to the teacher's role performance. The January document did not expand on the earlier limited description of the teacher's new role. It simply specified the assumptions underlying the innovation and speculated about individual differences among pupils and the process of learning. When discussions about the innovation occurred during staff meetings held within the period between the announcement of the innovation and the staff's efforts to implement it, they centered primarily on the kinds of materials that would be needed and how the pupils might react to them.

During the period between the end of January and our assessment in May, the administration continued to ignore the need to clarify staff ambiguity about the innovation at Cambire. Both administrators not only held ambiguous views of the catalytic role model themselves but also thought that it was the teacher's responsibility to develop a clear conception of their new role for themselves.

Our analysis suggests that the failure to clarify the new teacher's role may be attributed to the four following conditions. The first was the failure of the staff to communicate its lack of clarity about the catalytic role model to their administrators. This circumstance can be attributed in part to the administration's failure to communicate to the teachers that they would be asked to try to implement the innovation within a relatively short period of time; it also appeared to be a consequence of the staff's belief that the administration did not have a clear conception of the catalytic role model, and hence, efforts to obtain clarification would be of little value. The second condition was the lack of clarity on the part of the administrators themselves about the specification of the new teacher's role. The third was that both the Director and Assistant Director were operating on the assumption that "creative" teachers, if given maximum freedom, would "figure it out" for themselves. This assumption probably accounts for the minimal effort made by the Director to clarify the reservations of the teachers about the innovation. Finally, the extent to which the Assistant Director was not fully committed to the total implementation of the new role model appears to have played an important part in his lack of effort to clarify it for the teachers.

The Staff's Lack of Capability to Perform the New Role

We demonstrated in the preceding chapter that teachers continued to encounter numerous problems throughout the entire period in which they made efforts to implement the innovation, for example, discipline problems, low pupil motivation, and lack of pupil interest in the new instructional materials. The fact that these difficulties persisted throughout this period for the teachers suggested that their capability to perform the new role did not improve over time. What accounted for this condition?

Teachers began making their first efforts to implement the innovation in a state of "basic ignorance" about how they should behave because of the failure of the administration to see to it that they had a clear picture of the innovation before "urging" them to try it. During our interviews we asked teachers to describe their first efforts and subsequent efforts to implement the innovation. One teacher reported her initial effort as one of "offering the children a one-hour Tuesday afternoon activity period in which they could choose from a variety of activities the one they wanted to engage in -- from playing games like Rook to using reading, science, and math materials." Another said that her initial efforts consisted of the following activities: rearranging the room, trying to get along with the other teacher, and except for reading in the morning, recess, and lunch, giving students complete freedom. A third reported giving children an activity period from 11:15 to 12:00 noon or from 1:35 to 2:15 p.m., two times a week. All teachers, with one exception, indicated that they spent most of the time during their initial efforts to implement the innovation in carrying out directed classroom lessons in math, literature, social studies, science, art, as well as reading.

In their subsequent efforts to try to implement the innovation, six of the ten teachers said they had altered their original performance; four said they had not. It is critical to note that all six of the teachers who had made changes in their performance reported more structured subsequent efforts -- i.e., traditional teacher behavior and less open-ended activity. One put it this way, "We've cut down on their free time because we found children were wasting their time away"; another said, "We have less actual Comprehensive Classroom activities now, more whole classwork, and lots of individual work sheet activity. Then we let them go for some time each day." A third reported, "We found that the children couldn't use the free time, so both Arthur and I agreed not to give them complete freedom; they don't know the difference. . . ."

Thus, we found that those teachers who actually tried to create a great deal of "free" time for children initially reported shifts back to a more structured classroom environment. The others who made little or no effort to change their performance continued to conduct highly structured classrooms. The traditional "tone" of the classrooms of the six teachers who had made efforts to alter their performance appeared to be a consequence of the problems they had encountered in trying to carry out the new role, but which they were not able to overcome.

Our field observations revealed that teachers received little help within or outside of their classrooms as they attempted to implement the innovation and that there was little communication between teachers and administration about the problems to which the teachers were exposed during this period. The teachers' responses to questions about these matters corroborated our observations.

We asked teachers first to estimate the amount of effort that the Director, Assistant Director, and subject specialists expended in trying to help them; then we asked them to indicate the degree to which these individuals were a help or hindrance to them in coping with the problems they faced in implementing the innovation. We asked them to respond to these questions with reference to the period during which they made their subsequent efforts, which ended with the beginning of our assessment. The findings are summarized in Table 7-1.

All the teachers reported that the Director made no effort to help them during both time periods. One said, "The only thing Mark did was to give me the feeling that I could do anything; there was no pressure, no help; he was nebulous in the background"; another remarked, "Mark came to a couple of meetings, said a few things, he was like a phantom, an overseer with no practical help to offer."

A large majority of teachers reported that the Assistant Director offered little or no help during the time they made their initial efforts to implement the innovation; moreover, a still larger majority reported this to be the case during their subsequent efforts. In commenting on her relationship with the Assistant Director, one teacher said, "He never came into the classrooms to observe what was going on. As Assistant Director, he did nothing that I saw; occasionally in meetings he would throw out ideas but never in a planned way, they were 'off the cuff' 'occasional remarks.'" Another commented, "Rudy would say 'How's it going?'; he had nothing to do with the programs; at meetings he led discussions. . . ." A third noted, "You could go to him with any problem; he would try to talk it out; he listened to you. . ., but he didn't tell you how to do it; he didn't know. . . ."

Table 7-1 shows that the teachers reported that the subject specialists made more effort to help them with the innovation during their initial attempts to implement it than during their subsequent efforts. The kind of help provided by the specialists, however, was restricted largely to providing materials. One teacher in commenting on subject specialist B said, "He has no sense of

Table 7-1. Staff Perceptions Of Amounts Of Effort, Actual Help, And Extent Of Obstacle That The Director, Assistant Director, And Subject Specialists Were To Them During Their Attempts To Implement The Innovation (N = 10)

	During Initial Attempts					During Subsequent Attempts				
	5	4	3	2	1*	5	4	3	2	1
1. Director:										
Amount of Effort	-	-	-	-	10	-	-	-	-	10
Amount of Help	-	-	-	1	9	-	-	-	-	10
Amount of Obstacle	1	-	-	-	9	1	-	1	1	7
2. Assistant Director:										
Amount of Effort	1	2	-	1	6	1	-	-	2	7
Amount of Help	1	2	-	2	5	1	-	-	1	8
Amount of Obstacle	1	1	-	1	7	1	1	-	1	7
3. Subject Specialist A:										
Amount of Effort	2	1	3	2	2	1	-	-	4	5
Amount of Help	1	1	3	1	4	1	-	1	2	6
Amount of Obstacle	1	-	1	-	8	1	-	-	1	8
4. Subject Specialist B:										
Amount of Effort	2	1	3	3	1	1	-	1	3	5
Amount of Help	1	1	3	2	3	1	-	2	1	6
Amount of Obstacle	1	1	-	-	8	1	-	-	1	8

* Code: 5 = Great; 4 = Considerable; 3 = Some; 2 = Little; 1 = None.

place; he comes into the middle of a horrendous teaching spree and wants to tell me about a new bingo game; he did come across with one concrete thing like balance units, but didn't help me to learn how to use these units." Another staff member commented, "One [subject specialist] came up with paper work for the kids, phonic sheets, stories cut up and rearranged; the other brought new science stuff, some new games, not much else."

Most teachers, however, did not perceive any of the administrators or staff specialists as obstacles. Typical comments were: "None were obstacles, how could they be they didn't do anything"; "They weren't obstacles; they didn't come in. They should come in every day not once every two weeks." In short, the two administrators were mainly perceived as neither help nor hindrance, while the subject specialists were seen in a slightly more positive light.

Two teachers reported that they viewed their "teaching partners" as "considerable" or "great" obstacles. With one exception, no teacher reported other teachers as making efforts to be of help or as being of actual help to them in their attempts to cope with the problems they faced in their classrooms.

We asked teachers, "Who should be giving you help?" They mentioned with approximately equal frequency the Director, Assistant Director, and the two subject specialists. Some felt that all four should have worked as a team to be of service to the teachers. A typical comment reflecting this feeling was: "Rudy as Assistant Director should have set this up with John and Alex, and Mark should have been around, asking more questions, taking a decisive leadership role; it should have been a group effort, it wasn't!" Another statement reflecting teacher sentiment was:

> . . .he Mark should come into the classrooms by himself to observe; he only comes in when he wants to bring in a visitor and show off. . .Evaluators should be in rooms constantly; they don't even read our reports, one admitted this; they made us think up 70 questions; that's not my job that's their job; Mark should be making them evaluate us; we're too close to it. . . .

At the end of February, during an interview Mark stressed that the ideas for the new role model for teachers came from a number of sources including Educational Services Incorporated, John Holt, Jean Piaget, but mainly from Leicestershire. When asked how he conceived of the change in the teacher's role, he responded:

> I want the teachers to give themselves the idea that they can change themselves, I want to give the teachers the idea that they are professionals doing what each one wants to do. . . . I also wanted a school where the head of it took on the job of educational leadership, who felt free to experiment and change, we've had some problems here, too; we wanted a situation where the teachers would feel free to go to Rudy to get stuff and Rudy would feel free to do things. . . . [adding parenthetically that] The teachers were virtually fighting to try this thing in November; I didn't expect them to be so enthusiastic about it; I was really happy about this. . . .

The preceding excerpt suggests first, that Mark felt that the teachers if they were willing to change, and given the freedom to do so, could make the change without assistance, and second, that if any help were needed from someone "at the top," Mark expected Rudy to provide it. How did Rudy feel about the ability of the teachers to change their role performance?

In response to the question, "Do you think the teachers made the efforts they could have made at Cambire to implement the innovation?" he replied:

> Of equal importance to the idea of the novelty of the innovation, is the performance of the teacher. In other words what I'm saying is put it down on a mimeographed sheet and give it to some people, you'll have sheer disaster. Give that very same program to people who have a talent for that kind of program, you'll have a very successful program, so that you cannot say that innovation in itself is going to be successful. What you've got to say is an innovation with high performing teachers for that program will be successful. . . .

Rudy felt, then, that able and "creative" teachers were required if the innovation were to be implemented. However, he also seemed to be convinced of the importance of providing help to staff members. Acknowledging the importance of "helping teachers" to implement the innovation, he added:

> . . .I think the teachers themselves could have done more; but, I'm not putting the blame on them. I'm putting the blame on the orientation of these same teachers. If these teachers had been more properly oriented. . .even during the summertime, they could have used the summer for greater orientation; if at the same time we had the support of the subject specialists, if they knew what their role was, and if they carried it out, then they could take a teacher with inhibitions, they could take a teacher with frailties, they could take a teacher with mediocrity, and make that teacher perform better in her new role.

In response to the question, "Why didn't the specialists do these things?," he replied:

> Role expectations! I would have loved to have said to them that now that the program has reached this stage this is what we need and this is what I think we should do for these teachers. I'm talking about the subject specialists. But I couldn't say that because they were there under certain apprehensions and in all fairness to them they were fulfilling the role that may have been expected of them when they were first engaged, when they first volunteered to come in; and I'm not quite sure what they were told. . . .

Rudy's remarks suggest that he expected the subject specialists to give the "helping hand." However, this expectation was unreasonable since we have noted that the subject specialists did not have any clearer idea about the new teachers' role than did the teachers. As one specialist put it:

> He [Mark] doesn't have any answers. If he can tell me how we can do it all day long, fine. I mean it's easy to say, math and reading will be a concomitant result of all these activities. It's one thing to say you won't have to take kids and have a formal reading or math program but the next question is, How? He hasn't said how to do it.

Thus, the subject specialists did not believe that they were in a position to coach teachers or to give them advice about how to cope effectively with the problems they encountered in playing the new role. They gave the only help they were capable of giving: obtaining and distributing supplemental education materials. In short, the Director perceived the helping role for teachers as part of the Assistant Director's job; he, in turn, expected the subject specialists to assume this role. The specialists, however, were not capable of providing the kind of help the teachers needed.

The administration could have employed several methods to help the staff develop its capability to implement the innovation, but they were never used. First, since the innovation, according to Mark, was an amalgam derived from many sources, but primarily from Leicestershire, someone from its schools could have been contacted or brought to Cambire to demonstrate the new role and to show teachers how they might learn to cope with problems that arose. Second, staff meetings could have focused on discussing the problems that teachers faced; they could have been set forth clearly and examined in-depth. This was not done. Third, help was never requested of people residing in the metropolitan area where Cambire was located and who were knowledgeable about the central ideas involved in the innovation and how they might be made operational. Why were no attempts made to enlist the aid of such individuals? The reason Rudy failed to make these kinds of efforts after teachers began trying the innovation in February is suggested by his comments when interviewed after leaving Cambire:

> Now in February I knew that I was going to leave and so I was determined at that particular time that I wasn't going to rock the boat too much; I felt that they had shown some effort and that it was off the ground a little bit. I'd be leaving soon and John Helman would be taking over. He need not agree with what I was doing, and maybe he had another way of doing it, maybe he was entitled to do it his way and so from February till the time that I left [the middle of April] I went to the meetings and so forth, but I must admit that I had let up with the little bit of strength that I could have used to push the innovation.

Before most teachers at Cambire could conform to the new role model they needed to develop the skills and acquire the knowledge required to serve as a catalyst or guide to their pupils. They needed the help of persons qualified to demonstrate what constituted effective performance in the new role and of individuals who could help them acquire the techniques and behavioral skills needed to conform to its specifications. Because the innovation was based on a set of assumptions about the nature of the child and the learning process different from those held by most of the teachers, they not only needed to obtain new skills but also a set of new educational attitudes and values and a new way of viewing the phenomenon of schooling. Nothing short of a complete program of teacher resocialization was required. However, Rudy believed (Appendix B-4) that a teacher who had difficulties in conforming to the new role model need only "revert to traditional classroom procedures so that he can rethink his plan." Mark held the view that "teachers can change themselves." The Director and Assistant Director were thus apparently unaware of the need for the resocialization of the staff if it were to be expected to implement the catalytic role model.

Teachers at Cambire, therefore, did not develop the capabilities needed to perform in accord with the new definition of their role because they were not exposed to a resocialization process and were never given the help and advice they required. Our findings suggest that this circumstance was a function of three basic conditions: (1) the administration was unaware of the need for the resocialization of the teachers and did not establish procedures to initiate such a process; (2) the few efforts that were made to provide help to the teachers were marked by lack of frank communication and erroneous expectations. Mark delegated the responsibility of dealing with problems encountered by the teachers in their efforts to implement the innovation to Rudy, but he believed that "the helping" function was part of the subject specialists' role, although they reported a lack of understanding of the new definition of the teacher's role; (3) Rudy discontinued his efforts to provide help to the staff when he was informed in February, 1967, that he would soon be promoted to a principalship, and therefore, would be leaving Cambire. As a consequence of these conditions, the staff received little or no help in developing the competencies needed to implement the innovation.

The Unavailability of Instructional Materials

To implement the catalytic role model the teachers at Cambire required special educational materials that were never made available to them during the period between the announcement of the innovation and our assessment of its implementation. Why were they not provided?

The Director appeared to define the problem as one of constraints placed on the school by the larger system. Because Cambire was both part of the BEC, and also of the regular school system, the Director did not have the authority to spend funds allocated to the school for the purchase of instructional materials. He had to order them through the purchasing office of the school system which, however, permitted only the purchase of equipment and materials specified on an "approved" list. The list did not include "innovative" materials of the kinds necessary for use by teachers trying to implement the catalytic role model.

Williams noted this bureaucratic constraint on his purchasing of materials in a private document sent to the Superintendent's Office during the middle of February, 1967, several weeks after teachers were "urged" to make their first efforts:

> Difficulty in obtaining supplies and materials quickly enough has often hindered the experimental program from operating with desired efficiency. Experimental programs cannot be planned in detail sufficiently ahead of time to order supplies in conformity with procedures currently in effect. The needs of these programs cannot be predicted in the usual fashion, since, in most cases, succeeding phases of a program depend upon the results of the first experiments. A long lapse of time between the end of a first phase and the arrival of materials for a second phase can destroy the effectiveness of an entire program. The establishment of procedures that would enable the staffs of the experimental schools to order and to purchase materials directly and quickly would be highly desirable.

Thus, Williams appeared to define the unavailability of materials needed by teachers to perform the new role largely in terms of a constraint imposed on Cambire by the larger system, a condition that the Director apparently had difficulty in removing.

We think, however, that a more fundamental reason for the failure to provide the kinds of materials needed for implementing the innovation was that few instructional materials of the type required existed. We noted in the last chapter the comments of the administrators and subject specialists about the lack of "highly motivating, self-instructional" materials for children of different ages and of varying achievements and about the need for their development. The Director's attempts to enlist the aid of outside curriculum and educational media firms in developing such materials suggests that he was aware of this problem and had made efforts to cope with it.

Despite the constraints placed on the Bureau to purchase materials required for the innovation, it appears that even if this agency had been given complete freedom in this respect, the types of materials teachers needed to implement it did not exist. The administration, in effect, was requesting teachers to carry out an innovation that required unique types of instructional materials that were not available.

Failure to Adjust Organizational Arrangements

We noted in the last chapter that three school practices that were incompatible with the innovation existed at Cambire prior to its announcement: rigid scheduling of school time, age-grouping, and the report card system. The last two were never altered and the first, the school schedule, although altered, remained rigid in many respects. Why were the needed changes in organizational arrangements never made?

One possible explanation is that the willingness of school administrators to change long-standing practices to make them congruent with an innovation will depend in part on the extent of their commitment to it: the less their commitment to the innovation, the less they will be willing to institute changes in these practices. Data collected at Cambire revealed that the staff's immediate superior, the Assistant Director, had serious reservations about the innovation. He had mentioned earlier in one of his interviews some of his reservations about the innovation and had stressed his uneasiness about the way pupils were expected to learn to read. The interviewer first tried to summarize his earlier remarks:

> Your feeling was that although basically you liked the idea of trying out the innovation, you weren't convinced about all of its aspects, especially [its value in teaching] reading; you also didn't think that it was something that ought to be done all day with all kids. It was something that maybe should have been done only part of the day; Is this a fair statement?

Rudy replied:

> Well! My feeling was that we wanted to try to make the innovation work as one of the projects of the school. . . . I think his [Williams] idea would have been for the teachers to follow the new role model all day long. . . . I don't know, I don't think we've reached that stage where the innovation should be followed all day long at the Cambire School. You've got to think of kids, too. You're dealing with children, living children who deserve a good shake in education, and I wasn't confident enough to say that we could have good learning go on and find out all we can about it [the new role model] by giving them exposure to it all day long.

These sentiments are also reflected in his memoranda (Appendix B-4) to the teachers at the end of January in which he announced that the former practice of self-contained classrooms would be reinstated. His suggested schedule reflects his concern for maintaining a routine in which children are regularly exposed to formal instruction in reading and math, regardless of their interests.

An allegiance to maintaining a teacher-directed classroom with a focus on the teaching of specific subjects was also held by the subject specialists, as this excerpt from an interview with one of them reveals:

> I, initially, thought we'd have to modify it [the catalytic role model] and I still think we do in terms of materials and programs that are available; we have to go back to the so-called 'meaty' subjects such as reading, language, and math. I still think once we got to reading and math anyway we'd have to have more directed teaching. Well, maybe I'm misinterpreting the new model, but I envision some directed teaching going on, and I think I envision more than he [Mark] does.

The most reasonable explanation to account for the lack of change in the report card system and in age-mixing appears to be that the administrative personnel at the school were not aware that such changes were required.

Our evidence suggests that there was little recognition of the need for altering these traditional organizational arrangements at Cambire that were incompatible with the innovation. The extent to which this was due to a failure to recognize the importance of these conditions, to a failure of communications, or to an unwillingness to make changes by an administrator not fully committed to the implementation of the innovation, is an open question. The administration had the authority to make the required changes, but it did not do so. The continued existence of this barrier may be attributed, therefore, to the failure of the administrators of the Cambire School to institute the required changes.

Lack of Staff Motivation to Make Efforts to Implement The Innovation

Data presented in the preceding chapter showed that all of the teachers at Cambire were willing to make efforts to implement the innovation immediately after it was presented to them in November, but that during the following months their motivation or willingness to attempt to conform to the new role model steadily declined. What conditions accounted for the hardened resistance of the staff to make efforts to implement the innovation in May?

Our evidence strongly suggests that the decreasing willingness of the teachers could primarily be attributed to their increasing disenchantment with the innovation and its sponsorship, a disillusionment that grew out of a set of disappointments and conditions that they began to experience shortly after the announcement of the innovation and that continued to multiply during the ensuing period. The first of these appeared between December and February and consisted of the four barriers, considered in detail earlier, that teachers were never able to surmount. They became aware of ambiguities in the innovation and the unavailability of appropriate curriculum materials in December and early January, before they made their first efforts to implement the innovation. They began to realize their inability to perform in accord with the new expectations for their behavior and that existing organizational arrangements were incompatible with the new role model in late January and February, when they were asked to make their first efforts to implement the innovation. During this period, the staff also began to experience serious reservations about the Director's decision to introduce the innovation during the middle of a school year; they also began to feel interpersonal tensions in their relationships with their teaching partners as well as strain and fatigue as a consequence of the role overload to which they were exposed.

In March and early April, the Director's unwillingness to make the commitment to the teachers that they would again be assigned to

Cambire the following year, as well as their growing belief that the Director was "using them" in an unprofessional manner to promote "his" innovation, added to their mounting frustrations and sense of disillusionment.

In addition to these frustrating experiences, at the end of April, the staff became aware that the Director rejected the application of the school's informal leader for the position of Assistant Director at Cambire next year, and most teachers unofficially learned that they were not going to be invited to return for the following year.

We now examine in more detail these conditions as they emerged and multiplied, and how, through their accumulation, they led to growing staff disenchantment with the innovation and its sponsorship. We also will show how this combination of circumstances accounts for the emergence, "snowballing," and congealing of the resistance to the implementation of the innovation that was manifestly evident in May.

Obstacles That Were Never Removed

Our observations in the school and interviews with the staff provided abundant evidence of the teachers' initial frustrations over their inability to overcome the obstacles they encountered after the innovation was announced in November and their mounting frustrations during the period beginning in late January, when they attempted to implement it. The teachers' growing bitterness toward the administration because of its failure to clarify the ambiguities of the new role model and to show them how it was supposed to be implemented is evidenced by the following comments of one teacher:

> Everybody kept saying that they don't understand how to do it. Mark _never_ gave us definite plans; there was a lot of resentment that they were asking us to do something that they didn't understand themselves.

The teachers' growing anger over the unavailability of required instructional materials is illustrated by this excerpt from an interview with a staff member who was initially highly motivated to attempt to conform to the new role model:

> He [Williams] made it so flowery; I'd like to see him with these kids; he wrote it up in such a way that he gave me the impression that it was an easy thing to do. It isn't! I didn't have any equipment; I had to make up my own new games; they didn't give me what I needed.

The frustration of the teachers resulting from the failure of their superiors to adjust organizational arrangements that were incompatible with the innovation, such as the method of reporting grades, is indicated by the words of this teacher:

> Report cards are due; I have to grade these kids; now some things I can fudge around but not reading and math. If I have to make out report cards I've got to try to teach them this stuff; let them get rid of report cards and sell the parents on it and then I'll sit back and let them play all day. . . .

The strong feelings of the teachers about the unwillingness or inability of the Director to help them with the numerous problems they had encountered, or to see to it that they were provided with the types of assistance they needed, were expressed by one of the teachers as follows:

> . . .Williams, they were his ideas; we were trying to work them out for him and he was nowhere in sight. I am surprised

> that people didn't lose interest earlier or take a 'who cares' attitude; now this is so, but it wasn't this way in the beginning. . . .

In addition to the teachers' continued frustration over the four barriers that were never removed, in late January and February, they also began to experience serious reservations about the Director's decision to introduce the innovation during the middle of the school year; interpersonal tensions between teaching partners in the same classroom also began to emerge at this time, and teachers began to experience considerable fatigue and mental strain during this period as a consequence of role overload. At one and the same time they were being asked to continue to learn the new role, to carry it out, and to maintain important aspects of the traditional classroom environment as well.

The Timing of the Decision to Introduce the Innovation

Contributing to the development of staff resistance to implementing the innovation in late January and early February was the realization by teachers that the administrative decision to introduce the innovation at the end of January was ill-timed. As one teacher put it:

> At a meeting, Rudy said that Williams thinks it's a good idea for all of us to do it; I guess if you didn't like it, tough! I guess everyone wanted to; I didn't think one could refuse, I was surprised; we had been told to help Faith, now all of a sudden we were asked to do it!

Another said:

> When the brochure was passed out Faith was told she was the one [who was] to try it out. But, four weeks later we were all told, 'You are going to try it out.' I had everything

> worked out in my classes at that time; now, everything was to be upturned. We should have tried it either in October or waited for the next year; it was just too much work to try in the middle of the year.

Another staff member noted:

> The lack of communication was hindering. We should have had a meeting. Williams should have sat down with Rudy, Alex, and me and found out what we thought about the idea, about our positive or negative feelings, asked our reactions. He railroaded it. We should have had at least a weekly meeting. Williams by nature has a lack of organizational strength. Perhaps he was so busy with a myriad of problems and duties up there at BEC that he couldn't see the need for this. His idea was sound but he's not a strategist or tactician in implementing a program. This is because of his lack of experience. Maybe Mark expected Rudy to do it. Rudy didn't. But maybe Mark didn't communicate this to Rudy.

When the Assistant Director was asked whether the decision to request all teachers to try the innovation in January was made by the Director, Rudy said:

> The decision to introduce the innovation was made by Williams . . . . He [Mark] said to make it move in (pause); he didn't tell me exactly how to do it; he didn't give me that kind of direction.

In January one subject specialist explained the return to self-contained classrooms this way:

> I don't think Rudy moved until he got a mandate to do so. It had to be a clear-cut order. I know he had a great many misgivings about the innovation.

The Director was questioned about this matter in May, 1967. He noted, "Maybe I did say something about that to Rudy."

The basis of the decision in January to request all teachers to carry out the innovation was the administration's understanding about the teachers' willingness to make efforts to implement it when it was announced in late November.

In an interview with the Director in December, 1966, he said, "We were really surprised in November when all of the teachers said that they would be willing to try it [the innovation] out. . . ." In February, 1967, subsequent to the decision, the Director expressed the same view:

> The teachers were virtually fighting to try this thing out in November; I didn't expect them to be so enthusiastic about it; I was really happy about this. . . .

The Assistant Director also believed, and perhaps influenced the Director's perception, that the teachers were all willing to try the innovation in January. He reported:

> . . .as we began to talk about the innovation, it was after I handed out these books, [the November Document] I said, 'Now who would like to try it?'; everybody's hand went up and I said, 'Fine.' Then we began to redirect our energies toward it. . . .

A subject specialist recalled telling the Assistant Director that he had misinterpreted what the teachers' reactions were in January:

> I mentioned to him the next day that many teachers felt, you know, they were being compelled to try this at this time, and he said he thought he had made it clear that this was strictly a voluntary task. So, somewhere communications broke down again.

Evidence presented in the preceding chapter showed that the teachers at Cambire were initially willing to try the innovation when it was announced in November. The Director and Assistant Director assumed, because all teachers expressed a general willingness to try out the innovation in November, that they would, therefore, all be as positively predisposed to trying it at the end of

January. Data are not available to determine whether or not the decision to ask all teachers to make efforts would have been postponed if the Director had had a clearer understanding of the teachers' feelings about the introduction of the innovation in January. What is clear is that the administration did not make efforts to obtain an understanding of the teachers' reactions to the new role model in January before making the decision to ask all teachers to try it then, and that the teachers did not feel free to convey their honest reactions to their administrators.

Interpersonal Tensions Between "Teaching Partners"

When the teachers attempted to conform to the catalytic role model in February, they encountered additional difficulties. The administrators had instituted double staffing of classrooms on the assumption that a smaller teacher-pupil ratio would facilitate the likelihood of implementing the innovation. However, this arrangement led to two new serious problems: interpersonal conflicts between "teaching partners" and disagreements about how student teachers who were to serve as "second teachers" in the classrooms were to be trained.

One of the teachers described the strains and tensions that had developed in her relationship with her teaching partner and its effects on her willingness to continue to make efforts to try to implement the innovation as follows:

> Somehow this whole thing is catching up with me, and I am losing interest; part of it is Arthur; he says, 'let's not do it today,' and I go along; I am a jerk for doing it, but

> I go along. Ya know the new games?; Arthur took them home for his kids.

When asked whether she had discussed this matter with Arthur, she replied:

> I just can't tell him. It's really my fault. Arthur came in initially and took over. I think he thinks he knows more than I do. He interrupts me constantly; he makes me ashamed.

When asked whether she had discussed this problem with the Assistant Director, she complained:

> He would have put me off like he did in November when I complained about Arthur because he was too loud with his reading group and we were in the same room. Rudy's reaction was, 'He's trying.'

The following episode illustrates the tensions that existed between teaching partners in the Spring. A parent was in the office of the acting Assistant Director, John Helman, and was complaining about conditions she had observed in the classroom in which Stan and Linda were teaching partners. Both teachers were in the office when the parent asserted:

> . . .the class was very loud, completely out of control and several boys were on the floor fighting; now I want to know, is this the kind of new program these kids are getting?

At the close of this tense session Stan assured the parent that such an incident would not occur again. After Linda left the office Stan blurted out:

> The minute I leave that goddammed class, it falls apart. If I had that class by myself, I would have it so that I could stroll around the block and come back without it being noisy. . ., but with her, what the hell can I do? She lets them do whatever they want and expects me to pick up the pieces. . ., (As he stormed upstairs he asserted) there will be no play time today!

The field observation notes for that day showed that Stan punished the whole class by forcing them to spend the remainder of the day sitting at their desks with their hands folded. The children ate lunch in silence and were not permitted to read or do anything else.

The administrators wanted to use the time of the student teachers to facilitate the implementation of the innovation. The regular teachers, however, felt that they had an obligation to give the teachers-in-training the opportunity to behave in accord with the traditional role model and required the student teachers to conduct group instruction in specific subject areas. When we interviewed student teachers, all of them told us that they had wanted the opportunity to attempt to behave in accord with the catalytic role model and had expressed their desire to do so to the regular teachers.

However, the regular teachers felt differently about the matter. As one regular teacher put it:

> The student teachers must gain experience teaching regular classes. . . . When they get out of here they aren't going to teach in this kind of atmosphere; they must learn to handle thirty kids by themselves, in a traditional setting!

A student teacher put it this way:

> . . .he [the regular teacher] didn't think I should be trained according to the innovation so he had me teaching the whole class most of the time; he himself spent little time on it. . . .

Thus, the administration introduced double staffing because it anticipated that this arrangement would facilitate the implementation of the innovation. However, this new practice had unanticipated consequences that contributed to the teachers' frustrations and their growing unwillingness to make efforts to implement the innovation. The difficulties created by double staffing were never brought out in the open as problems that required solutions, and, therefore, were never resolved during the period between the introduction of the new role model and our assessment of its implementation.

Strain and Fatigue From Role Overload

In early January teachers were behaving in accord with the traditional role model. In late January, without prior training or orientation, they were asked to carry out the innovation at Cambire. This required teachers to make efforts of the following kind: explore how to use "innovative" materials in new ways; develop new materials; become adjusted to a teaching partner and in the case of teachers who had student teachers as partners, help them adjust to the experiences of being in a school; develop and use new procedures to monitor the directions in which children were progressing; help children to adjust to the new expectations for their behavior; prepare traditional lessons for reading and math; moreover, complete a great deal of paper work, including weekly reports to the Assistant Director and monthly reports to BEC. It is not surprising, therefore, that the teachers experienced a heavy degree of role overload in February and March.

One subject specialist described the teachers' situation as as follows:

> The change was just too much for them to handle. . . . Their role is twice as difficult now; not only do they have new curricula and materials, but also a new classroom organization and a new role as a teacher. More planning, more research should have been done; consultants should have been brought in. . . .

During February and early March our field observations indicated that many teachers were becoming exhausted and short tempered, and that these conditions appeared to diminish only when they reverted to their traditional patterns of performance for most of the day.

At Cambire, the administration not only failed to anticipate the role overload to which teachers would be exposed when they attempted to implement the innovation, but in addition, they did not cope with the problem once it was very apparent. This contributed without question to the teachers' frustrations and the emergence of staff resistance to the implementation of the innovation.

Staff Uncertainty About Reappointment to Cambire

In March and April a number of events occurred that added to the teachers' growing feelings of disillusionment about the innovation and its sponsor. Two of these events concerned whether the teachers would be reappointed to Cambire the following year.

At a faculty meeting in the middle of March, Rudy Gault distributed formal reapplication forms to the teachers so that they could request that they be assigned again to Cambire the following year. The teachers knew that positions at Cambire were to be filled on a yearly basis, that is, no permanent teaching positions had been allocated to the school. Teachers had been told earlier that if their efforts during the year were assessed positively they would be invited to return the next year; if not, they would not be asked back. The teachers interpreted Rudy's request to fill out the official forms to mean that their year of experience at the school would be disregarded when decisions were made about who would be invited to teach at Cambire the following year. The fact that Williams never personally came to talk to them about their work and did not waive the formal reapplication procedure also concerned them greatly. Moreover, at the meeting at which Rudy gave out the reapplication forms he also distributed forms to them to apply for a transfer to another school in the regular system the next year. Teachers informed us that they perceived this as meaning that Mark really did not want them back next year. The following short conversation among three staff members at that time indicates their feelings:

John sardonically said, "What we need is a cadre of teachers with nerves of steel."

Fred replied sarcastically by pretending to be unconcerned, "I am just looking over my release."

"Who is going to continue to try, if they know they're leaving?," interjected Ruth.

This meeting touched off a barrage of rumors about Mark, led to numerous discussions about the schools to which teachers at

Cambire probably would be assigned next year, and created considerable anxiety about the impact of their year at Cambire on their own careers. During the ensuing weeks the teachers spent a considerable amount of time discussing these matters. Their anxieites about their status at Cambire are reflected in the following conversation:

"Have you heard anything from Williams about next year?"

"Are you kidding? Rudy is leaving shortly and I can't get him to make a final decision about me, let alone for you next year."

"Well, if he doesn't want us back why doesn't he just come out and say so?"

"That's what I'd like to know!"

"What's all the secrecy about? Why can't he just tell us?"

The career anxieties of the teachers is evidenced by the following dialogue:

"Did you hear anything about next year?"

"We'll know come about September 1st!"

"I'll be damned if I'll wait that long before getting another position. I can just see Mark on August 31, 'Well we've found someone else to fill your position who has more creative ideas'; then you'll end up in some hole in this system with some nut as a principal cracking the whip over you."

"Not me, I won't wait that long, I'm looking now!"

"Me, too."

The continued concern and rumors about Mark's intentions are illustrated by the following interchange:

"He's going to get rid of all of us!"

"He wants to make it look like he's giving everyone a chance to be rated, but he really doesn't want most of us back."

"I don't think Mark knows what he wants!"

Rudy realized that something had to be done to allay the mounting anxieties and hostile feelings of the teachers. He invited Mark to meet with the teachers on April fifth, nearly three weeks after the meeting at which Rudy gave out the application forms, to discuss their future status. In answering a question about the number of people from the "regular" system who were applying for positions at Cambire, Mark commented:

> . . .we will now want to look at the whole batch. . . . We won't know yet for some time how many teachers we will need; we won't need to interview you, but those we don't know must be. I can't say who will be here; our program is based on a completely voluntary, carefully selected basis terminated either at the will of the teacher or the administration. (long pause) I realize this is awkward for you and me. (long pause) Are there any questions?

Stan responded, "When will we know whether we're coming back or not?"

Mark replied, "Oh probably in a month or so."

Almost in unison, the teachers responded in a tone of disbelief, "A month?"

A great deal of heated discussion ensued. The teachers demanded that they be notified by the following week whether they would be asked back. Mark immediately told them that he could not give them an answer that soon. He agreed, however, to phone the

Office of Personnel about this matter. When he returned to the meeting he reported that the following decision had been made:

> The Director of Personnel says it's OK for each of you to pick as first choice another school; if you are selected by Cambire the other application will be dropped and you'll have no obligation to it. . . .

The meeting ended shortly thereafter. The teachers were not only disappointed with the outcome of their meeting with Mark; most of them were furious about the way they had been treated:

> Mark is nothing but a big bag of wind!
>
> What did he tell us? If I can find better people, you'll leave, if I can't get anyone else you'll stay. . . .
>
> What principal in his or her right mind would wait for Mark to decide whether he wanted us?
>
> Gee, I'm not sure Mark really knows what he is doing now.
>
> You know in business and politics I expected double talk, but in education, I didn't; this is what makes me mad; most of us like the freedom here but not this kind of crap. Who is he kidding; what principal will let you tell him you will take a job in his school, but that he must wait to see if Cambire wants you first. If it does and then you tell the principal you can't take his job. . ., you'd be committing suicide in this system.
>
> If he doesn't want me that's OK, but why doesn't he tell us? That's what gets me mad, he won't tell me; maybe he's afraid we won't do anything the rest of the time we're here!

The Feeling of "Being Used"

The mounting difficulties and frustrations of the teachers were further exacerbated by certain events that took place in March and April that led teachers to believe that there was some foundation to the rumor that they were being used by the Director to "feather his nest." In spite of promises made as early as November by the administration that it would sharply curtail the number of visitors permitted in the school, more persons visited Cambire in April than in November. Moreover, in early April the administration asked teachers on several occasions to rearrange their schedules so that they would be sure to be engaged in the "activity period," that is, making efforts to implement the innovation when the visitors arrived at the school. One staff member remarked after receiving such a request:

> What bugs me is that they just call and tell us that they are coming. And we have to put on the show, activity period all of the time until they leave. The teachers are beginning to think that Williams is using them. . . .

The statement of a teacher, made after one of these requests, demonstrates the type of impact they made on the attitudes of teachers toward the implementation of the innovation. One said:

> I had to pull them back into a traditional class today; they got wild yesterday because of that activity period Rudy wanted for those visitors; I don't like putting on a show!

Another said:

> Last week I was really disturbed when we were told to put out new games for that visiting group even though we had never seen the games prior to their visit. . . .

Before the arrival of two prominent visitors one morning, the Assistant Director went to each classroom and requested teachers to begin activity period immediately after reading. They were asked to continue it until the visitors, who would be accompanied by Williams, left. In the hallway just prior to the beginning of the activity period, the following exchange was heard between two teachers.

"Time to put on the show!"

"Christ, he's [Mark] got everyone upset! Who the hell is this guy that's visiting? OK, if he wants a show I'll put one on; I don't care. But I don't understand it; this is Rudy's last week. Why is he so shook up? Why doesn't he tell Mark to go jump? [pleadingly] They can't all be that important; last week it was that urban group, then Mrs. Pierce, now these guys. . . ."

A teacher being interviewed that morning observed:

> Why must we continually cater to visitors? Who is it now? I'm sorry we have to break up our interview; I guess I have to go perform! The only time Williams comes down here is when he brings visitors or wants something!

Williams and the two visitors arrived late. They first met with the Assistant Director and the subject specialists in the school office. The following episode about this meeting was related to the field worker and most of the other teachers.

The Assistant Director began speaking to the visitors about the different parts of the curriculum at Cambire. He pointed to a set of plastic weighted numbers and a scale children used for arithmetic.

Visitor A, an unusually outspoken person, interjected, "This is really stupid, most of this stuff is useless. . . ."

A few minutes later the Assistant Director started explaining with great enthusiasm his idea of a school in the round. . . about the way the teacher would sit in the middle of this circular room in a glass encasement with a set of microphones. . . . Visitor A interjected, "Sounds like 1984 is here!"

The Assistant Director, wrapped up in his enthusiasm, failed to grasp the negative connotation of the comment. Interpreting this to mean that education is advancing very rapidly, he responded, "Isn't it great?"

Visitor A retorted, "No."

The Assistant Director became very embarrassed. Williams sat silent during this period; shortly thereafter, he said abruptly, "Let's go see the classes!"

Because the visitors and Williams had arrived late and had spent considerable time in the office, when they emerged from the meeting the school was having recess. The children were on the playground and were being supervised by a number of teachers; most of the remaining teachers were in the lounge having coffee. The classrooms were empty.

The Director in an astonished tone said, "Where are the kids?"

A staff member responded, "It's recess time; they're all outside having recess."

Williams retorted angrily, "Why? Why do they all have to be outside at the same time?"

Another staff member responded, "That's the only way they can get physical exercise and at the same time give the teachers a break from their classrooms."

The Director replied sharply, "Why do the teachers need a break. . ., the hell with the teachers!!"

Walking upstairs toward a primary room, Visitor A interjected, "It doesn't matter, I don't have to see the kids to know if something worthwhile is going on; all I have to do is look at the rooms."

Walking into the first room they reached on the second floor, Williams advised, "Let's get out of here, this room isn't any good!"

Moving into another primary room, Visitor A pointing to the built-in book cabinet said to Visitor B, "All these books do is take up space!"

The rest of the tour went no better; the visitors and Williams left the building as the children were returning to their classes.

Detailed accounts of this episode circulated among all of the teachers during the rest of the day and their reactions to it were bitter. Teachers were especially disturbed because Williams indicated no approbation for their efforts. The following statements reflected their feelings at the time: "Williams is after a big job somewhere else; that's why he's 'cow-towing' to this guy"; "he wants a big name and doesn't care who he has to step on to get one"; "Why the hell should I break my back if that's the attitude he takes toward us"; "He's feathering his own nest; he's not stupid; he doesn't care about us"; "If that's the way he feels the hell with him; I'll do just what I have to, to keep things going and no more!"

Two Final Blows to Staff Morale

Two occurrences during the last week in April contributed immensely to the teachers' disillusionment with the Director and the innovation. The first was the rejection of John Helman's application for appointment as Assistant Director at Cambire. The second was the announcement that most of the teachers would not be reappointed to their teaching positions at the school for the following year.

Rudy left Cambire to assume his new job in the middle of April, just before spring recess. When school reopened a week later, Williams invited John Helman to serve as acting Assistant Director for the remainder of the school year, but at the same time informed Helman that he would not be recommended as the person to be appointed for next year. John wanted the job very much and he and the other teachers had anticipated that he would get it; the teachers' reactions to this decision are revealed in the following conversation between two teachers:

"John is the only one who really tried to help us get together. . .; he's the only one who has kept the spirits of the teachers up and kept this place together. . .; it's not right. . . ."

"I have no feelings of loyalty anymore; this is bad. How can you be loyal to a guy who does something like this. . . , a guy who isn't honest with the people who work for him. . . . I just don't have any feelings about Williams anymore and I know he doesn't care about us. (long pause) If I can get another job I'm going to take it. . . ."

In a meeting with the teachers at the end of April Helman told them that Williams had hired or was about to hire new people for nearly all the teaching positions at Cambire, a decision which most teachers had by now anticipated. Helman ended the meeting with the following remarks:

> I know these last few months have been positively insulting; why, one handling a crew at the docks wouldn't handle them the way he's handled us; anytime you take one's dignity away! All that was talked about at the meetings were first and second choices and qualifications; now he's picking them out of a black hat; it's too bad because this could have been a good thing next year. . . . It's almost 4:00; before we break up let's get one thing straight; as long as I am in charge we're going to have order around here. I don't care how you run your classes but I want order, none of this running up and down stairs, fighting, and wandering from one room to another, in and out of classes; I want these last few weeks to be as pleasant as possible for both you and me, OK?

The sentiments expressed by the acting Assistant Director reflected the solid resistance that had developed by this time among nearly all of the staff to making further efforts to implement the innovation. When Helman was asked whether he planned to hold any meetings to discuss the innovation now that Rudy was gone, his response was blunt and direct:

> We're not having any formal meetings on Mondays or Wednesdays. . . . I won't call any, and if I do, they won't be to talk about the innovation. They were never called before to talk about it, so why should I do it now? Hell no! Why should I set this job up for someone else in the fall. Besides, I can't push teachers who have been given such a bum deal. How can I make teachers who know they're not coming back and who got such a rotten dumping make any effort to do anything. . . .

To summarize: our evidence showed that the staff's lack of motivation to make efforts to implement the innovation in May was the result of its steadily increasing disenchantment with the innovation and its sponsorship, a disenchantment that began soon after the announcement of the innovation by the Director and reached its peak of intensity as the year drew to a close. The findings revealed that this disillusionment grew out of a set of disappointments and conditions that they began to experience shortly after the announcement of the innovation and that continued to multiply during the ensuing period. The first of these, appearing between December and February, were the four barriers the teachers never surmounted; they recognized ambiguities in the innovation and became aware of the unavailability of appropriate curriculum materials in December and early January; then, in addition to these, in late January and February after they began to make efforts to implement the innovation, they began to realize their inability to perform in accord with the new role model and began to recognize that existing organizational arrangements were incompatible with it. Also during late January and February, the teachers began to have serious reservations about the Director's decision to request all of them to make efforts to implement the innovation that late in the year. They were also feeling interpersonal tensions in their relationships with their teaching partners and strain and fatigue from role overload when they made their efforts to perform in accord with the new role model.

In March and early April, the Director's unwillingness to commit next year's teaching positions to the staff and the teachers' growing belief that the Director was "using them" in an unprofessional manner to promote "his" innovation, contributed to their mounting frustrations and disillusionment. The congealing of the growing disillusionment came at the end of April as a result of the staff's learning that the Director rejected the application of the school's informal leader for the position of Assistant Director at Cambire next year and learning unofficially that most of them were not going to be invited to return the following year.

An Explanation of the Obstacles to Which Teachers Were Exposed: The Implementation Strategy of the Director

To this point in the chapter we have focused on the question: What accounted for the emergence and persistance of each of the five major barriers that served as obstacles to the teachers' implementation of the innovation at the time of our assessment in May, 1967?

We now enquire whether the emergence and persistance of these five conditions can be attributed to a more fundamental organizational circumstance. Our analysis suggests that each of them is linked to a common root: the failure of the administration to recognize or to resolve problems to which it exposed teachers when it requested them to implement the innovation. And this condition, we contend, was a consequence of the Director's simplistic view of the process of the implementation of organizational innovations and his lack of awareness of his role obligations to his subordinates when he initiated this process.

The Director's view of the steps required to implement the innovation, as evidenced by the strategy he employed, may be briefly described as follows: (1) explain the philosophy and objectives of the innovation to teachers through several written documents; (2) give teachers maximum freedom to carry it out; and (3) delegate responsibility to an administrative subordinate (the Assistant Director) to see that the innovation is implemented. Williams' conception of how to promote successful educational change stressed making funds available to schools so that new ideas could be tried out and providing teachers with maximum freedom so that they could carry out an innovation as "professionals," that is, independent of the bureaucracy of the school system. In his words:

> . . .we began to pick up a lot of the new ideas. . .drawn from or coincidental with a lot of the work that has been done over the last nine or ten years in Leicestershire in England which means essentially getting the teachers off the kids' backs, getting the administration off the teachers' backs, and saying to the teachers. . ., 'you're adult professionals, you said you wanted to experiment, you said you were full of ideas, go to it.' That's not exactly how we did it because actually we came in and said, 'we'd like to try some of the ideas at Leicestershire. . . .'

In February, in response to a question about his perception of how the staff at Cambire viewed him, Williams said, "I would guess probably as the agent for setting up the situation at Cambire; an originator of ideas; they shouldn't, but I think they see me as their boss. . . ."

In April of 1967, Williams commented as follows on a copy of a proposal for an innovation submitted to him by a teacher at Cambire:

> Fred -- I think this is excellent -- It catches the spirit of what we are trying to do at the Cambire. It also is a good example of the thoughtful professionalism we are trying to

> release in our teachers. It's there -- but we all have to convince ourselves that we can let it out and make it work -- Good Job --
>
> (Signed) Mark

The Assistant Director's appraisal of Williams' approach corroborates this interpretation of his orientation to educational change:

> . . .Mark felt that getting the teachers together, providing the funds, and expressing his ideas, even though they were not fully crystallized for himself, was an initiative which would propel us into innovation, you see. And his thinking was, 'if it's worth doing, you're going to do it yourself. You're not going to do it because I tell you to do it. If you're really interested, you'll evolve it for yourself.'

We contend that the Director's strategy was essentially inadequate for two basic reasons. First, it failed to take account of numerous difficulties and obstacles to which the teachers were exposed that could have been anticipated and that would require the intervention of management to resolve them; and second, it contained no provisions for mechanisms to identify and cope with unanticipated problems that might emerge during the period of attempted implementation.

The Director's strategy for implementing the innovation disregarded the kinds of obstacles that were likely to confront the teachers as they attempted to implement the catalytic role model. We have noted a number of these barriers; for example, lack of clarity about the expectations for their role performance; their reservations about the assumptions underlying the innovation; unavailability of the types of instructional materials required;

incompatible organizational arrangements; difficulties in changing their pattern of role performance and in dealing with new problems created by the innovation such as maintaining control of the classroom and ascertaining pupil interests. Since the Director's strategy essentially ignored these potential problems, no efforts were instituted *prior to the introduction of the innovation* to remove or minimize these barriers to the implementation of the innovation. But these potential obstacles could have been anticipated with a little forethought and dealt with if the Director had recognized that the implementation of an innovation such as the new role model is a complex process and that, therefore, his strategy needed to include provisions for attempting to identify difficulties and barriers that subordinates would probably encounter and for instituting procedures to cope with them.

The second major deficiency in the Director's strategy was its lack of feedback mechanisms. We noted that the Assistant Director had a number of reservations about the innovation as did the subject specialists and a number of the teachers. But the Assistant Director was not given an adequate opportunity to communicate his feelings to the Director about this matter. When discussing Williams' lack of help in promoting the implementation of the innovation, he added:

> . . .he was too busy, I was lucky to sit down and corner him and tell him what was happening. . . . I had to use my own insights. . . . He was concerned about staffing the school for the Fall, in other words, he was learning about the city, the system, the people, how they got there, and so forth; he was very much interested in what would happen *next September*. (Italics ours.)

Furthermore, the teachers and subject specialists seldom spoke frankly to their superiors about their reservations in regard to the innovation and the difficulties they encountered as they attempted to implement it. And none of the other interpersonal and organizational problems to which they were exposed during the period of attempted implementation, the sources of their feelings of frustration, were ever discussed openly and frankly. The condition, we contend, was a consequence of the lack of provision for feedback mechanisms. The Director made numerous assumptions about the innovation and the operation of the Cambire School that were in fact tenuous. He assumed that the Assistant Director and he were in agreement about the nature of the innovation. He assumed that the teachers did not need outside assistance in coping with their classroom problems and that those that arose could be effectively handled by the Assistant Director or the subject specialists. But these and other assumptions of his were in fact erroneous and since the Director did not provide for feedback mechanisms in his strategy of implementation, he had no way of obtaining "the facts," so that he could not identify or attempt to cope with these unrecognized barriers to the implementation of the innovation.

We, therefore, conclude that the most plausible explanation of why the barriers to implementation existed may be attributed to two fundamental deficiencies in the strategy used by the Director to promote the implementation of the innovation: (1) he failed to identify and deal with the types of difficulties teachers were likely to encounter in their attempts to implement it, and (2) he failed to establish and use feedback mechanisms to uncover barriers that arose during the period of attempted implementation.

Chapter 8

CONCLUSIONS AND IMPLICATIONS

In his incisive paper on "The Bearing of Empirical Research on Social Theory" Merton (1957) points out that one of the ways in which empirical inquiry invites the extension of theory is through observation of neglected facts. In his words, "When an existing conceptual scheme commonly applied to a subject-matter does not adequately take these facts into account, research presses insistently for its reformulation. It leads to the introduction of variables which have not been systematically included in the scheme of the analysis" (p. 108).

Our case study resulted in identifying a set of facts that were of critical importance in explaining why the effort to implement a major organizational innovation in a school failed and that appeared to have been neglected in the explanation most frequently used to account for the success or failure of efforts to implement changes in organizations. These findings supported our reservations, specified in Chapter Two, about those formulations that are based on the assumption that the problem of implementing organizational innovations is essentially one of overcoming organizational members' initial resistance to change.

In this chapter we first review the findings of the case study as they bear on our reservations about the "resistance to change" explanation and spell out their theoretical implications.

In the final part of the chapter we will discuss the practical implications of our investigation for the management of change in schools.

Theoretical Implications of the Study

The Postulate of Initial Resistance to Change

The explanation most commonly invoked to account for the success or failure of organizations to implement inovations is based on the postulate that their members are initially resistant to the introduction of organizational change, and therefore, that the degree to which innovations are implemented will in large part be a function of the ability of management (or an outside change agent) to overcome their resistance.

We maintain that the basic premise of this explanation, namely that most organizational members are initially resistant to change, needs to be challenged since it may be tenuous in many empirical situations. The rationale for this assumption seems to be that members are generally satisfied with existing organizational conditions and thus that any major disturbance in them will be met with resistance. We submit that in many organizations the empirical reality is that their members are exposed to difficult problems in their work situation and would welcome innovations that appeared to offer solutions to their difficulties. Therefore, we question the "resistance to change" assumption and consider a more tenable one to be that the degree to which organizational members are resistant to change is problematic and should not be treated as "a given."

The "overcoming resistance to change" explanation clearly cannot be invoked to account for the failure of the teachers to implement the innovation at Cambire. The case study revealed that prior to the announcement of the innovation a basic norm shared by all teachers in the school was that they should accept and promote educational change. Our observations prior to the introduction of the new role model indicated that the teachers were using new types of instructional materials and desired fundamental changes in the operation of their school. Therefore, we were not surprised to find that all teachers were willing to make efforts to carry out the innovation initiated by the Director. Since all the teachers were positively predisposed to accept major educational changes in their school when the innovation was presented to them, the "overcoming resistance to change" explanation cannot be invoked to account for the staff's failure to implement the innovation at Cambire. Our case study, in short, supported our general contention that the "overcoming resistance to change" explanation was too simplistic to be used as a general theory for explaining why organizations fail or succeed in their efforts to implement innovations.

We now turn to the three additional reservations that we expressed in Chapter 2 about the "overcoming resistance to change" formulation, each of which reflected our judgment that it is too simplistic to account for the success or failure of organizations to implement innovations, and review our findings with reference to them.

Barriers Encountered by Organizational Members

Our first reservation was that the resistance explanation ignores the whole question of barriers that may be encountered by members of organizations in their efforts to carry out innovations.

Our findings showed that the failure to implement the innovation in May was attributable essentially to a number of obstacles that teachers encountered when they attempted to carry it out that were never removed. What were these barriers that were of critical importance in accounting for the failure of the implementation effort we studied but that existing conceptual schemes disregard?

One barrier that blocked the teachers' efforts to implement the innovation throughout the six-month period was their lack of clarity about the new role model. Our observations of teachers as they attempted to implement the model indicated that most of them did not have a clear image of the role performance expected of them. Our formal interviews confirmed these field observations. They revealed the teachers never had a clear understanding of the innovation. When the teachers were asked about their understanding of the innovation just before they were requested to make their first efforts to implement it in January, most teachers still indicated confusion about it. And when we asked the teachers about the clarity of the innovation in May, just prior to our assessment of its degree of implementation, most teachers again indicated that they still had an ambiguous notion of what was expected of them.

These findings emphasize the importance of taking into account the variable, clarity of an innovation as perceived by organizational members, in conceptual schemes designed to explain the success or failure of efforts to implement innovations.

A second barrier to the implementation of the innovation uncovered by our inquiry was the teachers' lack of the skills and knowledge required to carry it out. All teachers reported that they encountered serious problems that they were unable to resolve when they made their initial efforts to implement the innovation in January. Moreover, they all indicated that these unresolved problems persisted during the following months as they made subsequent efforts to carry it out, and furthermore, that new problems, with which they could not cope, also arose. We concluded that the minimal efforts they made to implement the innovation in May were in part attributable to the condition that they lacked the skills and knowledge required to perform the new role. These results underscore the need to include the variable, capability of members of an organization to implement an innovation, in formulations designed to account for the success or failure of efforts to implement innovations.

A third barrier to which the teachers were exposed in their efforts to carry out the innovation was the unavailability of required materials and equipment. In a brochure prepared for the teachers by the administration, they were told that teachers should "transfer as much of the instructional and 'motivational' responsibilities as possible from the teacher to the total classroom environment -- and to the greatly enhanced materials with which the room should be filled." But our observations in the classrooms revealed that "highly motivating self-instructional materials" were never made available to the teachers.

Most of the materials that were available represented the kind of supplementary materials that could be found in a well-stocked suburban elementary school. They did not represent instructional materials that permitted pupils to progress very far in a meaningful way on their own, that is, without instruction from the teacher.

These findings stress the importance of including a third variable, the availability of necessary materials and equipment, in explanations designed to account for the success or failure of efforts to implement innovations.

A fourth obstacle that blocked teachers in their efforts to implement the innovation was a set of organizational arrangements that were incompatible with the innovation, for example, the rigid school schedule. Another incompatible organizational arrangement was the system of evaluating pupils, one that required teachers to "give grades" to each child for his mastery of different skills and subjects. These findings argue for the inclusion of a fourth variable, compatibility of organizational arrangements, in theoretical formulations designed to account for the implementation of organizational innovations.

The Possibility of the Development of Resistance

It needs to be stressed that we are not objecting to the notion that when members of an organization are resistant to change (that is, lack the motivation or are unwilling to make the necessary efforts to implement an innovation), this condition will block the implementation of an innovation and will need to be removed if it is to be carried out. What we have to this point objected to is the assumption of the "overcoming resistance to change" explanation that in *general* organizational members are *initially* resistant to the introduction of change and its failure to recognize obstacles to which they can be exposed in their efforts to implement an innovation.

An additional reservation that we had about the "resistance" explanation was that it failed to take into account that resistance to an innovation can *develop* among organizational members *after it has been introduced* as a consequence of frustrations they experience in attempting to implement it. We observed such a development at Cambire.

In November, 1966, there was general acceptance of the need for change at the school, and despite the fact that four of the teachers indicated somewhat negative reactions to the innovation at the time of its announcement, all of them reported a willingness to try to carry it out. However, at the time of our assessment in the spring, most staff members were no longer willing to make such efforts.

These findings emphasize the necessity for theoretical schemes proposed as explanations for why organizations succeed or fail to implement innovations to recognize that organizational members' resistance, or lack of willingness to make efforts to implement innovations, can develop after they have been introduced, that is, *during* the period when members attempt to implement them.

We have now specified several ways in which our empirical case study invites the extension of theory with respect to the implementation of proposed organizational changes. We contend that formulations applied to the problem of implementing directed change must take into account, in addition to staff resistance as a potential obstacle, the following conditions: the clarity of an innovation, members' capability to perform it, the existence of necessary materials and resources, and the compatibility of organizational conditions with the innovation. All five of these variables had a bearing on the failure of the implementation effort we studied; we would argue that they constitute a set of conditions that need to be viewed as *desiderata* for the maximum implementation of most organizational innovations. Moreover, we also contend that these formulations must also take into account the possibility that resistance to change may emerge after the introduction of an innovation and can vary over the period of time during which implementation efforts are made.

The Role of Management in the Implementation of Innovations

Our final major reservation about current theories designed to account for the implementation of organizational innovations concerned the limited attention they give to the influence members of an individual's role set, especially persons in management, have on the implementation process. The power equalization formulation, for example, assumes that the primary contribution management can make to the success or failure of the process is sharing power with those organizational members who must implement an innovation. Although we do not question the proposition that if organizational members are resistant to change, power equalization *may* be one means by which their resistance may be reduced, we do question the implicit assumption of power equalization schemes that this is the only or primary way management needs to be involved in the implementation process. What these schemes have ignored is that the performance of management can influence the degree to which innovations are implemented in *other* important ways, most notably in establishing and maintaining the conditions that will permit subordinates to carry out innovations, that will facilitate their attempts, and that will reward them for their efforts. The importance of the role performance of management became especially evident in our case study when we attempted to account for the reasons that the major barriers to the teachers' efforts to implement the innovation were in evidence six months after its introduction into Cambire.

Our findings indicated that the teachers' lack of clarity about the new role model could largely be attributed to the following conditions: ambiguities in the minds of the Director and his administrative subordinates about the specific nature of the new role requirements for teachers; the failure of the administrators to provide effective mechanisms for teachers to obtain clarification about their role expectations; and the failure of the staff to secure clarification about the innovation because of their lack of confidence in the capabilities of their administrators. In attempting to account for the staff's lack of the skills and knowledge required to implement the innovation, we concluded that this condition was primarily attributable to the failure of the administration to recognize that the teachers needed to be resocialized if they were to be able to conform to the new definition of their role and its failure to provide them with the type of retraining they required. The unavailability of the self-instructional materials that the teachers needed to implement the innovation was attributed to the failure of the administration to face up to the reality that such materials did not exist at the time and that teachers had neither the skills nor the time required to develop them on the job. The failure to make modifications in organizational arrangements was traced back to two circumstances: the administration's unawareness that certain organizational arrangements were incompatible with the implementation of the new role model and to reservations of the Director's key administrative subordinate, the Assistant Director, about the innovation. The sharp decline in the teachers' motivation to attempt to implement the innovation and the development of their resistance to it between November and May was attributed to their growing disillusionment with the innovation and its sponsorship that resulted from an accumulation of obstacles that were never resolved and disappointments and frustrations they experienced that multiplied over this time period. Our findings, reported in detail in Chapter Seven, indicated that the teachers' growing disenchantment with the innovation and the administration were a function of a large number of conditions that the administration did not recognize, ignored, or dealt with in inept ways.

We concluded on the basis of this large body of evidence that the teachers were unable to implement the innovation largely because the administration failed to recognize or to cope effectively with the problems, difficulties, and uncertainties to which it exposed teachers when it asked them to carry it out. And this, we contended, was a consequence of the Director's simplistic view of the process of the implementation of organizational innovations and his lack of awareness of his role obligations to his subordinates when he initiated this process.

Our analysis suggested that his strategy of implementation was deficient in two important respects: (1) he did not attempt to identify and deal with obstacles that it could have been anticipated the teachers would be exposed to in their attempts to implement the innovation, and (2) he failed to establish and use feedback mechanisms to uncover barriers and problems that arose during the period of attempted implementation.

These findings demonstrate the need to reformulate existing conceptual schemes so that they take into account that when management adopts an organizational innovation and asks subordinates to implement it, subordinates may be unable or find it difficult to make changes in their role performance unless management conforms to a set of expectations that subordinates "have a right to hold" for its performance. More specifically, subordinates have a right to expect management (1) to take the steps necessary to provide them with a clear picture of their new role requirements, (2) to adjust organizational arrangements to make them compatible with the innovation, (3) to provide them with the resocialization experiences required so that they will possess the capabilities needed to cope with the difficulties they face when they make efforts to implement the innovation, (4) to provide the resources necessary to carry out the innovation, and (5) to provide the appropriate supports and rewards to maintain their willingness to make the efforts. Furthermore, subordinates have a right to expect management to be committed to the implementation of the innovation, to provide effective mechanisms and effective decision-making procedures to cope with anticipated and unanticipated problems that arise. Our findings suggest the proposition that the extent to which these expectations are recognized by management, built into its strategy, and conformed to, will have a direct bearing on the degree to which subordinates implement organizational innovations. The role of management, in short, in the implementation process needs to be brought to center stage in theoretical formulations of the problem.

Toward a Theory of the Implementation of Organizational Innovations

Our case study thus led us to the isolation of a number of conditions and circumstances that appeared to account for the failure of the implementation efforts at Cambire but that are not taken systematically into consideration by the most commonly invoked theoretical explanation, one that treats the problem of implementing organizational changes as essentially a problem of overcoming resistance to change. In short, our findings underscore the need to take into account a number of variables which have not been included in this theoretical formulation.

We maintain that the starting point for an explanation of the differential success of organizations to implement innovations needs to be based on the following assumptions.

The first is that the degree to which an innovation is implemented is a function of the extent to which five central conditions are developed and/or maintained during the period of implementation.

The first condition is the degree to which members of an organization have or develop a clear understanding of the innovation. Clarity will be positively related to their ability to implement it. If they have an ambiguous understanding of the innovation, then they will be unclear about what is expected of them. If they have an erroneous interpretation of the innovation, then their efforts at implementation will be misguided. The second condition is that a staff's ability to implement an innovation will be a function of its capacity to carry it out. If teachers lack the skills and knowledge required to perform in accord with the demands of the innovation, then it will be impossible for them to carry it out. The third condition is that their ability to carry it out also depends on the availability of the materials and other resources required by the innovation. The fourth condition is the compatibility of organizational arrangements with the innovation. If arrangements in existence prior to the introduction of the innovation are incompatible with it and are not changed, then it will be more difficult for them to carry it out. To this point we have maintained that four conditions will influence a staff's ability to carry out an innovation -- the clarity of the innovation, its capabilities, the availability of required materials and other resources, and the compatibility of organizational arrangements with the innovation. However, if all of these conditions are fulfilled, it does not follow that the staff will implement an innovation. The staff must also be willing to expend the time and effort required for its implementation, and hence, this condition also must be operative.

Our second assumption is that the extent to which these five conditions are fulfilled and/or maintained during the period of attempted implementation will be a function of the performance of management. If ambiguity or confusion exists in the minds of the staff, management is in the best position to clarify the situation. Furthermore, the authority to establish training programs and provide the materials and other resources required for the innovation is lodged in management. In addition, only it has the power to make changes in organizational arrangements that are incompatible with the innovation. And it, too, is the agency that can offer the types of rewards and punishments required if the staff is to be continuously motivated to expend the time and effort required to implement an innovation. Moreover, management can most effectively handle difficulties that arise and that inhibit the development or maintenance of these conditions. For example, at Cambire managerial actions could have alleviated conditions such as teacher role overload, interpersonal strain between teaching partners, and teacher frustrations from lack of managerial support, circumstances which played an important part in the emergence, development, and congealing of staff resistance to the innovation and its sponsorship.

If, as we have assumed, the implementation by the staff of an innovation is a function of the degree to which the five conditions specified above are fulfilled and maintained, and if as we have additionally assumed, the extent to which these conditions are fulfilled and maintained will be a consequence of the performance of management, then it follows that the degree of implementation of an organizational innovation will be a function of the extent to which management facilitates the development and/or the maintenance of these conditions.

Additional Theoretical Considerations

Until now we have stressed findings of the case study that suggest the need for the reformulation of existing conceptualizations of the problem of the implementation of organizational innovations. Now we consider several additional reservations about these formulations that arose from our critical appraisal of them.

The first is they ignore the possible impact upon the implementation of innovations of forces external to organizations. In the case of schools, for example, they ignore the possibility of significant influence from aspects of the larger school system, such as higher administrative officials, and the potential impact of parents and community agencies on the implementation process. In our case study these influences appeared to be minimal. However, in other situations pressures and constraints from the outside could have major consequences for the process.

Another issue that needs to be raised about existing conceptualizations is that they assume that the nature or complexity of

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an innovation is irrelevant to its successful implementation. It may turn out, however, that different strategies of implementation tend to be more or less effective depending upon such circumstances as the magnitude of change required of organizational members to carry out the innovation and the difficulties it creates for them. This suggests the need for a typology of innovations and the possibility that different explanations will be required to account for the successful implementation of different types of organizational innovations. In this connection, it is important to note that the theoretical explanation we offer in this report to account for the implementation of organizational innovations may be relevant for only certain kinds of major organizational innovations, for example, those involving radical changes in the role performance of organizational members.

Our findings and reflections about the general problem of implementing major organizational innovations has led us to recognize the need for the development of a model that conceptualizes the successful implementation of innovations as a dynamic process involving a complex set of interrelated variables. It may be the case that our present conceptual tools are inadequate to cope with this problem in its full complexity. However, we are convinced as a consequence of our case study that theoretical inroads can be made in isolating some of the central variables involved in the process. Subsequent studies will need to make deeper probes into this problem area, and we urge others to become involved in this challenging task.

The implications or generalizations drawn from a single case study, of course, must be taken with many grains of salt. And this case study is no exception. We would have greater confidence in our conclusions if they had emerged from studies of both successful and unsuccessful efforts to implement organizational innovations. However, we believe our study does raise a number of basic questions that have been ignored in schemes designed to account for the success or failure of the implementation of organizational innovations and suggests a number of variables that need to be systematically taken into account in subsequent theoretical formulations. We would contend that the findings of our inquiry and our speculations about the general problem indicate the need for the reformulation or extension of theory about the implementation of organizational innovations.

Practical Implications of the Study

We turn now to a discussion of our conclusions that may prove useful to school administrators concerned with the promotion and management of educational change in their organizations. Of the many possible implications that can be drawn from our findings, we shall focus on three which we believe may be of greatest utility to them.

Implementing Educational Change: A Complex Process

Educational administrators typically conceive of the process of promoting successful change in schools as including three requirements: first, locating or developing a promising new educational idea; second, obtaining the funds needed to support it; and third, ensuring that the professional staff is willing to carry it out. If the innovation does not take hold, the failure is generally ascribed to the absence of one or a combination of these requirements: the idea itself may have been found wanting, the anticipated financial support may not have been forthcoming, or the staff may be resistant to educational change. Most school administrators appear to hold the view that if the initiation phase of the educational change process -- getting the "right" idea, securing the required funds, and overcoming resistance to change -- is well handled, innovations will be readily implemented.

Our study raises serious questions about this image of educational change. We found that the innovation introduced into the Cambire School was not implemented despite the fact that it represented a promising new educational idea, was supported by ample fiscal resources, and was proposed to a staff with a positive orientation to educational change. This finding strongly implies that although these conditions may constitute necessary prerequisites for the successful initiation of educational change, they do not represent a sufficient set of requirements for the successful implementation of innovations. We submit that one of the major causes for the inability of many school systems to demonstrate positive educational effects from their attempts to institute educational change may be attributed to the truncated version of the change process held by their administrators.

Our case study showed that the obstacles and frustrations to which the teachers at Cambire were exposed, and that eventually led to their abandonment of efforts to carry out the innovation, arose during the period subsequent to its initiation, that is, during the period of attempted implementation. Therefore, we would contend that the following assumption made by many administrators needs to be challenged: when an innovation is introduced into a school and teachers are willing to make efforts to carry the change out, it will then be implemented. Our study suggests that initial acceptance, even enthusiasm for an innovation on the part of a staff, is not enough to ensure its implementation. Although teachers may start off with extremely positive feelings toward a proposed change, they may encounter frustrations and serious difficulties in their efforts to carry it out that, if uncoped with, can snowball into a resistance to the innovation that will be both hard to stop and harder to reverse. Experiences of this kind could readily cancel out their earlier positive attitudes, as they did in the case of Cambire.

In conceiving of educational change as a complex process, administrators will also need to recognize that most innovations require considerable alteration in the usual patterns of behavior of teachers. For them to break away from old modes of behavior and to begin to act in new ways is no easy matter and may take considerable time. At Cambire the teachers found the task of attempting to serve as catalysts, rather than as directors, of learning for children virtually impossible because the Director largely ignored difficulties they encountered as they attempted to change their performance. The teachers became immobilized in their efforts to implement the innovation because the pathways to the very changes they were being requested to make were never open to them.

Administrators also need to be aware that in the process of their staff's attempts to change from old behavior patterns to new ones, some stressful periods are almost sure to occur. Although likely to appear to teachers as setbacks, such periods may actually constitute required forward steps towards the implementation of an innovation. If administrators anticipate these periods and recognize that they probably are largely functional in "unfreezing" old pattersn of behavior, then they will be prepared to provide, "at the right times," the types of support and help teachers require if they are to benefit from these experiences. Administrators and teachers need to view such periods as a natural part of the journey from old forms of behavior to new ones, not as stumbling blocks to implementation.

In the case of Cambire, the teachers viewed their pupils' early reactions to their efforts to conform to the new role model as "wildness," "rudeness," and "lack of motivation," and being unable to cope with such behavior they began to turn back to their traditional ways of teaching. If this behavior of their pupils had been explained to the teachers as conduct to be expected when a transfer of "control from without" to "control from within" is being attempted, the teachers could have been able to accept this behavior of their pupils as transitional. That is, the pupils, just like their teachers, needed to learn about how to learn in a new way. In other words, it could have been readily anticipated that children would probably need to react in this manner when first exposed to a freer classroom situation in order for them to be able to move on to more self-directed activities.

Obstacles to the Implementation of Innovations

A second idea of considerable importance that emerged from our study, one largely ignored in current educational efforts to implement innovations, is that problems are bound to arise in efforts to carry out the "best laid plans of mice and schoolmen," and therefore, that mechanisms need to be created both to isolate and deal effectively with them. Many educational administrators recognize that they may need to cope with initial resistance to change on the part of organizational members and take steps to overcome it. However, they characteristically overlook critical problems that arise when teachers *attempt to implement* innovations.

Development and effective operation of workable systems of feedback are needed to ensure that difficulties will be pinpointed, analyzed, and that steps will be taken to resolve them. At Cambire the lack of feedback mechanisms, for example, largely accounted for the failure to recognize and cope with the ambiguities teachers had about the new role model. And even when limited opportunities were provided for teachers to inform administrators about their difficulties, such as at faculty meetings, management failed to provide an atmosphere which invited and allowed teachers to speak frankly.

Another critical problem that the administrators at Cambire overlooked was the need for the teachers to be resocialized. Teachers were asked to conform to a new role model but were not provided with the skills and knowledge they needed. It was assumed by the innovator that any professional teacher "worth his salt" could read a document or two describing the innovation and then, on his own, radically change his behavior in ways that were congruent with the new role model. The teachers were exposed to a host of difficulties when they tried to do just that and these difficulties were not recognized by their superiors or resolved. As noted, teachers tried to behave in accord with the catalytic role model but immediately found themselves exposed to new responses from their pupils. Neither prepared for this new pupil behavior nor equipped to deal with it effectively, they quickly reverted to the security of their previous kinds of behavior. If the innovator had thought carefully about the new skills that "a willing" teacher needed in order to be able to shift to a drastically new way of working with pupils, he could have provided the teachers with the help they needed, for example, through role-playing sessions and "coaching" by competent individuals. He could have shown teachers films of classrooms being conducted according to the new role model and involved teachers who were already educating children in this new way in activities at Cambire. Such help, however, was never provided. The frustrations of the teachers mounted as they found that their difficulties were largely unrecognized and that no help was or would be forthcoming.

Another difficulty that the Director never recognized, and that served as a barrier to the implementation of the innovation, was the lack of the Assistant Director's commitment to it. Because of his reservations about the new role model and other reasons, he did not offer leadership to the teachers or provide them with the kinds of help they needed. We submit that the literature underplays the importance of leadership for the implementation of educational innovations. We also would contend that the notion, frequently found in the literature, that the individual professional teacher, somehow, on his own, will find within himself the ability and drive to carry out new school programs and practices, should be questioned. This perspective ignores the need that teachers have for stimulating and professional leadership. It also overlooks the need for coordination of teacher activities in innovative efforts as well as the fact that there are many classroom and school conditions over which administrators, not teachers, have the greater control.

Administrators, then, need to be aware of the importance of anticipating that difficulties are bound to develop in the course of change efforts and of the necessity of creating feedback mechanisms that will ensure that problems being encountered are aired and heard; they then need to work with their staffs to analyze and resolve these problems.

The Role of Management During Implementation

A third idea emerged from our findings that is of considerable utility to educational administrators: the critical importance of their performance with respect to the success or failure of the implementation of innovations. Administrators typically assign the responsibility for carrying out an innovation to subordinates or to an outside change agent. They appear to assume that their own responsibility is terminated when they make the decision that the organization will adopt a new educational program or practice. Our study implies that there is great need for a critical reevaluation of their responsibilities during the period of implementation. As noted, since management is in the position to command an overall view of the organization and of the complex set of forces that influence it, only it can give general direction to the entire course of implementation efforts. It needs to recognize that educational change typically is a difficult and complex process and that teachers can encounter many obstacles over which they have little control in their efforts to implement innovations. It is management that is in the best position to anticipate these problems and to set in motion forces to minimize or overcome them. It is management's responsibility to develop an overall strategy for change.

Our study suggests a number of different tasks that management will need to address itself to in "becoming centrally involved" in the innovation process. The fact that few difficulties were reported by teachers, although they were in fact experiencing many, suggests a strong need for management to keep in close touch with the process after the wheels of implementation efforts have been put in motion. It needs to see that immediate feedback mechanisms exist and that they are operating effectively. At Cambire, the Director essentially disregarded the need to ascertain the reactions of teachers to the innovation and the problems they were exposed to in their efforts to implement it. He apparently assumed that no news is good news. This is a highly tenuous assumption for administrators to make in guiding their organizations.

Another task of management is to assess the special types of problems that can be anticipated to arise when different types of innovations are introduced into their organizations. Many administrators assume that all innovations are cut from the same cloth and that the same general strategy will fit almost any change proposed. They need to give careful consideration to the unique qualities of a proposed change and its implications for planning its implementation.

In designing a strategy, whatever it may be, a number of decisions will be required. One is the decision about whether the innovator, when he is willing and available to direct implementation of his own idea, or some other person should be given the responsibility for directing the change process. Although the qualities needed to develop promising innovations and those required to put them into effect may be found in the same individual, we suspect that this combination of abilities in the same person is rare. Decisions will also need to be made about whether outside assistance will be required, how needless strain can be minimized, and how interpersonal conflicts will be dealt with.

Our study suggests that the strategy used by administrators to institute major educational changes needs to be based on a careful assessment of the conditions that must be fulfilled for the implementation of innovations. At Cambire the Director's failure to consider this matter was of critical importance in accounting for the failure of teachers to implement the innovation. His strategy did not consider the obstacles that confronted the teachers as they attempted to implement the innovation. We contend that most of them could have readily been anticipated if he had based his strategy on a more realistic set of assumptions about the complexities of the process of implementation and the potential difficulties subordinates can encounter in attempting to carry out innovations proposed by their superiors. Perhaps the most general value of our study then for administrators is that it suggests a set of prerequisites that may serve as guidelines to be used in assessing their proposed strategies to secure implementation of innovations in their organizations. They may be specified as follows: (1) making the innovation clear to the staff members involved in implementation, (2) providing the experiences required for developing the staff's capability to perform in accord with the innovation, (3) ensuring that the staff is willing to make the appropriate innovative efforts, (4) making the necessary materials available for implementation of the innovation, and (5) rearranging the prevailing organizational incompatibilities to the innovation. With respect to the fifth prerequisite, it is important to add that management, in analyzing existing incompatibilities in the organization, needs to pay special attention to aspects of its own role performance that may be incongruent with the innovation, and therefore, that may have to be altered permanently in order to permit continued implementation. The school, as an organization, consists of a set of inter-related roles, and because of this permanent changes in the teachers' role performance may require permanent changes in management's, if the changes resulting from the implementation of the innovation are to be retained. At Cambire, for example, traditionally administrators made the decisions, in accord with a standard curriculum, about the types and amounts of materials needed in the classrooms. To promote the innovation these decisions would have to be turned over to the teachers. The authority system of the school would require permanent alteration to guarantee that teachers had the right to make such decisions and that management accepted the legitimacy of their making decisions in this area.

We would also suggest that those who advocate the use of T-groups, participation of subordinates in decision making, and the use of change agents need to assess these activities in terms of their actual contribution to organizational conditions required for effective implementation of innovations. For example, in schools where teachers prefer considerable direction from above, it seems unlikely that strategies stressing "participation" would be most efficacious.

Our case study suggests the importance of the need for a strategy which includes mechanisms for effective feedback between the initiators of the change and those who must implement it, and which maintains efficient problem-solving mechanisms for both unanticipated and anticipated issues which arise during the period of attempted implementation. Our study also stresses the need for management to think through a strategy which emphasizes its leadership role not only in setting new goals and initiating innovations, as in the case of Cambire, but in seeing to it that the organizational conditions it specifies as necessary for implementation are established and maintained. At Cambire, during the period of time between announcement and assessment, the administrators' leadership was minimal. Indeed, under the banner of "teacher professionalism," the management failed to conceive of teachers as organizational members who must rely on their superiors to fulfill many of their needs when they make efforts to implement organizational innovations. Our findings bring into bold focus the need for leadership in the management of the innovation process and the consequences that follow when it does not exist. The implementation of educational innovations, in short, not only requires alterations in behavior expected of teachers but also changes in the role performance of management.

One final point: it is our hope that studies of the type we have undertaken will increase the probability of the effective implementation of educationally promising ideas of administrators such as those of the Director of the Bureau of Educational Change. Only when such innovations are fully implemented will we be in a position to assess their educational effects. Currently, we would contend that many promising educational innovations have been rejected on the basis of experimental designs that fail to take into account that the innovations may have been inadequately implemented. Clearly, when a new program or practice has not had a "fair" trial, judgment about its educational utility must be held in abeyance.

APPENDIX A: SPECIMEN RESEARCH INSTRUMENTS

Several formal data collection procedures, in addition to various informal methods, were employed to gather evidence during our study. Presented below are three instruments which we used, and which are discussed in Chapters Three and Five:

(A-1) The Teacher Interview Schedule

(A-2) The Classroom Observation Schedule

(A-3) The Self-Administered Teacher Questionnaire

The teacher questionnaire was actually the second half of a two-part battery taken by the teachers in May, 1967. The first part, The Edwards Personal Preference Schedule, is a standardized, published psychological test and is not included in the appendix. For a detailed discussion of this test see Buros, 1965.

A-1: The Teacher Interview Schedule

TEACHER INTERVIEW SCHEDULE

INTRODUCTION

1. We're very interested, as you know so well by now, in educational innovations, primarily from the teacher's perspective. You may think it's corny to say again, but I really appreciate your willingness to help. Without your openness and frankness we could never hope to understand the effort to innovate in this school, from your point of view.

2. While everyone is talking about introducing new ideas and programs into schools, we really don't know very much about what in fact happens when innovations are brought in.

3. Since it is our belief that this is one of the most important but neglected problems in education, what we have been doing here is trying to get a much better picture of the practical realities and problems arising in schools where innovations are introduced.

4. From our observations and informal talks we feel that we have a very good general understanding of what has been happening here. You may even find me asking you questions which you know you've answered before.

5. However, now we want to see this process from the teacher's point of view but in a much more systematic way, what I mean is beginning at the time when you first heard about the innovation up to the present.

6. I've mentioned the matter of anonymity before, but I do want to assure you again about it. (You can show that name doesn't even appear on papers you're writing on.)

7. We welcome your afterthoughts about this interview, be they additions, corrections, or deletions, so any time afterwards please don't hesitate to tell me about any changes you'd like to make.

8. Do you have any questions? (Make sure questions are handled before proceeding.)

TIME CHART

THE TIME WHEN YOU FIRST HEARD THAT THE INNOVATION WAS GOING TO BE TRIED HERE.	THE PERIOD OF TIME BETWEEN WHEN YOU FIRST HEARD AND WHEN YOU MADE YOUR FIRST ATTEMPTS.	THE TIME WHEN YOU MADE YOUR FIRST REAL ATTEMPT TO TRY IT.	THE PERIOD OF TIME BETWEEN WHEN YOU MADE YOUR FIRST REAL ATTEMPTS AND THE PRESENT TIME.	PRESENT TIME

(Month) J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J

1965 1966 1967

TRANSITION NOTE 1

Let us go back to when you first heard that the innovation was definitely going to be introduced here.

1. When was that?

2. How did you first learn about it? Formally____ Informally____
(PROBE: Meeting? Oral? Individually?)

   a. Who presented it?

   b. Can you recall the atmosphere?
   (PROBE: Casual? Exciting?)

   c. Were any reasons given for it? Y N OS

      IF YES: What were they?

   IF FIRST HEARD FORMALLY, GO TO QUESTION 4

3. Was there a teacher's meeting at which the innovation was presented? Y N OS

   a. Who presented it?

   b. Can you recall the atmosphere?

   c. Were any reasons given for it? Y N OS

      IF YES: What were they?

4. In general, what was your overall reaction to the way the innovation was announced or proposed?
(Use CODE A* for teacher's reaction)

   Why did you have this reaction?

5. Let's be a little more specific about your initial reactions.

   a. From the way it was proposed or announced, did you get the impression that:

      1) this was a proven educational idea___or was its value was still open to question___? Why?

      2) this innovation was being treated as an experiment?
      Y N OS Why did you feel this way?

---

*See p. 290 for response categories included in each code used in the interview.

3) you had to try this out___or were given the option of doing so___? What gave you this impression?

4) this had really been carefully thought through? Y N OS Why did you feel this way?

5) there were specific plans for putting the idea into effect? Y N OS What gave you this impression?

6) the timing was right? Y N OS Why did you think this was so? (PROBE: Time of Year? Role Demands?)

b. Were you taken by surprise by its announcement___or did you expect it___? Why?

So far we have been talking about the way the idea was introduced and your reactions to it; now let's turn to the nature of the innovation itself.

6. When innovations are introduced into schools, teachers may differ in their reactions to them. How did the nature of this innovation strike you when you were first aware that it was going to be introduced here?
(Use CODE A for teacher's reaction)

Why did you feel this way? (PROBE: Other reasons?)

7. Now, let's explore this in greater detail. After the innovation was first described to you, did you feel that you had a clear understanding of it? Y N OS

IF YES: How would you describe it?

IF NO: What was unclear about it? Describe what you thought it was all about.

8. What, at that time, did you think (give names) hoped to accomplish by introducing it?

9. Did you think these were worthwhile objectives? Y N OS

IF YES: Why?

IF NO: Why not? (OMIT NEXT QUESTION)

10. Did you believe that there was a need "for this particular innovation" (IF response to question seven was "unclear" then: "for something like this") in this school? Y N OS

IF YES: Why?

IF NO: Why not?

11. How much importance did you feel the following people gave to getting this innovation into your school?
(List Names) (Use CODE B for Amount of Importance)

What did (give names) do to make you feel this way?

12. Did you feel that the innovation would work here? Y N OS
What were your reasons?

13. After you first heard about the innovation did you feel you had a clear picture of what you were expected to do in carrying out the innovation? Y N OS

IF NO: In what respects was it unclear?

14. In order to do this did you think that you would have to make any changes in your behavior? Y N OS

IF YES: From the initial proposal of this innovation by (give names) how did you think (give names again) expected you to change?
(List Old Behavior) (List New Behavior)

IF NO: Why not? (GO TO QUESTION 17)

15. Did you think that the innovation would require changes that weren't expected by (repeat names used in #14)? Y N OS

IF YES: What were they?

16. Did you think you could make the changes (repeat names used in #14) expected in your behavior, when you first heard about the innovation? Y N OS

IF NO: Why not?

17. When new ideas are introduced into schools they sometimes have positive consequences for teachers, sometimes negative consequences, sometimes both.

a. Did you think there would be any positive consequences for you? Y N OS

IF YES: What would they be?

b. Did you think there would be any negative consequences for you? Y N OS

IF YES: What were these?

18. What about the consequences for other teachers:

a. Did you think there would be any positive consequences for other teachers here? Y N OS

IF YES: For whom? In what ways? (PROBE: In general? For specific teachers?)

b. Any negative consequences? Y N OS

IF YES: For whom? In what ways?

19. How about your pupils?

a. Any positive consequences? Y N OS

IF YES: For what kind of child? In what ways?

b. Any negative consequences? Y N OS

IF YES: For what kind of child? In what ways?

20. We have been talking about many different aspects of the initial period when you first heard that this innovation was going to be introduced here. What was your basic feeling, how did you honestly react to the whole notion of bringing it into this school?
(Use CODE A for teacher's reaction)

Why did you feel this way?

21. How about the other teachers here?

Let's talk about the ones you respect most. Who are they?

(List Names)

Let's talk about (add names desired by interviewer) too.

a. What were their overall reactions to the innovation? (Repeat Names) (Use CODE A for their responses)

More specifically,

b. Did they have a clear picture of what this innovation was all about?
(Repeat List of Names) (Use CODE C for Responses)

c. Did they agree with its objectives?
(Repeat List of Names) (Use CODE C for Responses)

d. Did they feel the need for this innovation here?
(Repeat List of Names) (Use CODE C for Responses)

e. Did they believe that this was a top priority in this school?
(Repeat List of Names) (Use CODE C for Responses)

f. Did they believe that this would work here?
(Repeat List of Names) (Use CODE C for Responses)

g. Did they think they knew how they would have to change?
(Repeat List of Names) (Use CODE C for Responses)

IF NO: GO TO QUESTION i

h. Did they believe that they could make these changes?
(Repeat List of Names) (Use CODE C for Responses)

i. Did they believe it was really worth their while to do this?
(Repeat List of Names) (Use CODE C for Responses)

22. In a moment I would like to turn to the period after the innovation was announced, but before we do I want to give you the opportunity to discuss any other matters you think would be helpful for us to know about the way it was announced or your initial reactions to it.

TRANSITION NOTE 2

Now let's focus on that period of time between when you first heard about the innovation and when you first tried it in any way in your classroom.

1. How long was this period?

2. During this period how much:

   a. thinking did you do about the innovation?
   (Use CODE D for Response)
   Why? IF ANY: What? (USE SPECIAL PROBE)

b. reading about the innovation did you do?
(Use CODE D for response)
Why? IF ANY: What? (USE SPECIAL PROBE)

c. writing did you do about the innovation?
(Use CODE D for response)
Why? IF ANY: What? (USE SPECIAL PROBE)

d. talking did you do about the innovation?
(Use CODE D for response)

1) Why? IF ANY: What? (USE SPECIAL PROBE)

2) With whom? (PROBE: Teachers? Administrators? Others, specify?)

3) How? Formally? Informally? (PROBE: Meetings? Workshops? In-service training?)

4) Where? (PROBE: Inside? Outside school?)

3. Did you have any serious questions or reservations about the innovation during this period? Y N OS

IF NONE: GO ON TO 4

IF YES: What were they? Why?

4. What were (give name)'s activities in connection with the innovation during this period?
(USE SPECIAL PROBE)
(List Names) (List Activities)

What did you think of them?
(Repeat Activities) (PROBE: Helpful? Hindering?)

5. Why did you feel this way about them?
(Repeat Activities)

6. Were you completely satisfied with what was done? Y N OS
(USE SPECIAL PROBE)

IF NO: Why not? What do you think they should have done?

IF NO EFFORTS WERE MADE:

7. Why do you think they didn't do anything? Did you find this silence helpful___or hindering___?

IF HINDERING: What could they have done? (USE SPECIAL PROBE)

IF HELPFUL: How was it helpful? What else would you have done? (USE SPECIAL PROBE)

IF 8, 9, OR 10 WERE MENTIONED, say:

Just to make sure I really understand you (then go to question 8)

IF 8, 9, OR 10 WERE NOT MENTIONED, say:

Sometimes what administrators do may not seem like efforts to promote the innovation and yet may be. For example:

8. Did the administration try to find out what your feelings about the innovation were? Y N OS
(USE SPECIAL PROBE)

IF NO: Why do you think they didn't try to find out?

9. Did they attempt to answer questions you had about the innovation? Y N OS
(USE SPECIAL PROBE)

IF YES: How did you respond to their attempts?

IF NO: Why do you think they didn't make the attempt?

10. Were the questions or reservations you had effectively dealt with to your satisfaction during this period? Y N OS
(USE SPECIAL PROBE)

IF YES: By Whom?

IF NO: Why in your estimation weren't they effectively handled?

11. Now, as specifically as possible, as a result of what went on during this period did your feelings change about:

a. your understanding of what the innovation was all about?
Y N OS

IF YES: How? Why?

b. your agreement with what they wanted to accomplish?
Y N OS

IF YES: How? Why?

c. the need for such an innovation here? Y N OS

IF YES: How? Why?

d. the priority that this change was given in your school? Y N OS

IF YES: How? Why?

e. whether or not it would work here? Y N OS

IF YES: How? Why?

f. how you would be required to change? Y N OS

IF YES: How? Why?

g. whether or not you could make such changes in your behavior? Y N OS

IF YES: How? Why?

h. the advantages or disadvantages of trying this out, either for you, the pupils, or other teachers? Y N OS

IF YES: How? Why?

12. Just before you first tried out the innovation, what was your overall reaction to it? (Use CODE A for Response)

IF NO SHIFT FROM INITIAL REACTION GO TO QUESTION 14.

13. Is it correct to say then that you had made a shift from your first reaction? Y N OS

IF NO: Why not?

IF YES: How would you account for the change? Were there any particular people who influenced your shift?

14. Is it correct to say that you still felt the same way as you did at first? Y N OS

IF YES: What were the major reasons for keeping your first position?

IF NO: Why not?

TRANSITION NOTE 3

Let's shift our attention now to the period when you first started trying out the innovation.

1. First, however, have you in fact started trying to carry it out? Y N OS

   IF NO: Why not? (THEN GO DIRECTLY TO THE NEXT SECTION)

   IF YES: When did you begin?

2. How much effort would you say that you put into trying to do it at first? How hard were you trying? (Use CODE D for Response)

   Why?

3. What kinds of things did you do? (List Activities)

   a. How well did each of these things work out as far as you were concerned? (Repeat list of activities) (Use CODE E for responses)

   b. What were the reasons for your feelings?

4. At the beginning did you find any serious problems in trying to carry out the innovation? Y N OS

   IF YES: What were they? (PROBE: Any others?)

5. How much did (Give name of person(s)) really try to help you overcome any of these problems? (List names) (Use CODE D for Amount of Effort)

6. What did (Repeat List of Names) try to do to help you?

We have been talking about the problems you had during the period of your first attempts and the extent to which others had tried to help you.

7. Now let's explore the extent to which the following people really were a help to you in your first attempts to carry out the innovation.

   a. How much help was (Name of Person) to you? (List Names) (Use CODE D for Amount of Help)

   b. Anyone else?

c. Who was the most helpful? Any others?

d. How did (Read list of Names) help?

8. Now let's talk about the extent to which the following people were obstacles or blocked you in any way in your first attempts to carry out the innovation.

   a. How much of an obstacle was (name of person) to you? (List Names) (Use CODE D for Amount of Blockage)

   b. Anyone else?

   c. Who was the greatest obstacle during this period?

   d. How did (Read list of Names) block you?

9. Was there any help or advice that you needed during the period when you made your first attempts, which you didn't get?
   Y N OS

   IF YES: What kind?

10. Who, in your judgment, should have provided these (this)?

TRANSITION NOTE 4

We have been talking about your first attempts to carry out the innovation. Now we want to focus on the period between those first attempts and the present time.

1. Have you continued to try to carry out the innovation?
   Y N OS

   IF NO: When did you stop?

   Why did you stop? (THEN GO DIRECTLY TO SECTION 5)

2. Have you continued to make the same kinds of attempts you first made? Y N OS

   IF NO: Why not?

   IF YES: Which ones?

3. Have you tried to do anything new since your first attempt?
   Y N OS

   IF NO: Why not?

IF YES:

a. What new things have you tried since your first attempts? (List New Activities)

b. How well have these things worked for you? (Repeat New Activities and use CODE E for Responses)

c. What are the reasons for your feelings?

4. Have any of the problems arising during your first attempts continued to exist? Y N OS

IF YES: Which ones?

5. Have any new problems arisen during the period between your first attempts to try out the innovation and the present time? Y N OS

IF YES: What have they been? (PROBE: Any others?) (List Activities)

6. How much has (give name) really tried to help you overcome any of these problems? (List Names) (Use CODE D for Amount of Effort)

7. What has (Repeat List of Names) done to try to help you? (List Activities)

We have been talking about the problems you have continued to have since your first attempts, problems which have arisen after those first attempts and the extent to which others have tried to help you with any of these.

8. Now, let's explore the extent to which the following people have really been any help to you in the period between your first attempts to carry out the innovation and the present time.

a. How much help has (give name) been to you? (List Names) (Use CODE D for Amount of Help)

b. Anyone else?

c. Who has been the most helpful? Any others?

d. How has (Repeat List of Names) helped? (List Activities)

9. Now, let's talk about the extent to which the following people

have been obstacles or have blocked you in any way in the period between your first attempts to carry out the innovation and the present time.

a. How much of an obstacle has (give name) been?
(List Names) (Use CODE D for Amount of Obstacle)

b. Anyone else?

c. Who has been the greatest obstacle during this period?

d. How has (Repeat List of Names) blocked you?
(List Activities)

10. Has there been help or advice that you have needed that you haven't gotten? Y N OS

11. Who, in your judgment, should be providing this?

12. Overall, during the period between your first attempts to carry out the innovation and the present time, how much effort have you made in trying to carry it out?
(Use CODE D for Response)

13. How do you account for this?

14. Do you think your efforts have been successful in implementing the innovation here? Y N OS

IF YES: Why do you believe this?

IF NO: What are your reasons for not believing this?

TRANSITION NOTE 5 (FINAL)

In this final section I want to focus primarily upon the situation today with respect to the innovation, and in the process review some of what you told me before about your earlier experiences with the innovation to make sure that I accurately understand what you have said.

1. In regard to the amount of effort you have made:

	AT FIRST	PERIOD BETWEEN	PRESENT TIME
Great	______	______	______
Considerable	______	______	______
Some	______	______	______
Little	______	______	______
None	______	______	______

How much effort are you now making to carry out the innovation? (Record response under "Present Time" column)

IF SHIFT: Why?

2. In regard to the kinds of attempts you have made: (REVIEW SCHEDULE: First, then Period Between)

   Are the kinds of things you are doing now different from before? Y N OS

   IF YES: In what ways have they changed?

3. In regard to the problems you have had in trying to carry out the innovation: (REVIEW SCHEDULE: First, then Period Between)

   a. Do any of these earlier problems continue today? Y N OS

      IF YES: Which ones?

   b. Any new ones?

MAKE CLEAR TO THE SUBJECT THAT THERE WILL NOW BE A SHIFT IN THE TIME PERIODS BEING REVIEWED.

4. In regard to the clarity of what the innovation is all about: (REVIEW SCHEDULE: Initially, then Subsequently)

   Has the degree of clarity of the objectives of the innovation changed? Y N OS

   IF YES: Why? How?

5. In regard to the value of these objectives: (REVIEW SCHEDULE: Initially, then Subsequently)

   Do you feel differently now? Y N OS

   IF DIFFERENT: Why? How?

6. In regard to the need for the innovation here at the school: (REVIEW SCHEDULE: Initially, then Subsequently)

   Do you feel this way? Y N OS

   IF NO: Why? How?

7. In regard to the degree of priority the innovation has here: (REVIEW SCHEDULE: Initially, then Subsequently)

Have you changed your mind about this? Y N OS

IF YES: Why? How?

8. In regard to the chances of the innovation working here:
(REVIEW SCHEDULE: Initially, then Subsequently)

Have your feelings changed about this? Y N OS

IF YES: Why? How?

9. In regard to what you are expected to do to carry out the innovation:
(REVIEW SCHEDULE: Initially, then Subsequently)

Do you feel differently now? Y N OS

IF YES: Why? How?

10. In regard to making changes in behavior:
(REVIEW SCHEDULE: Initially, then Subsequently)

With the school as it is now, have you changed your mind about being able to make such shifts? Y N OS

IF YES: Why? How?

11. In regard to the consequences of trying to carry out the innovation for you, other teachers, or pupils:
(REVIEW SCHEDULE: Initially, then Subsequently)

Have your feelings changed about any of these? Y N OS

IF YES: Why? How?

12. In regard to your overall reaction to the introduction of the innovation here:
(REVIEW SCHEDULE: Initially, and Subsequently)

	INITIALLY	SUBSEQUENTLY	NOW
Very Positive	______	______	______
Somewhat Positive	______	______	______
Ambivalent	______	______	______
Somewhat Negative	______	______	______
Very Negative	______	______	______

What would you say your feelings are now?
(CODE RESPONSE ABOVE IN "NOW" COLUMN)

IF SHIFT: Why?

13. In general, do you feel more willing to try to implement the innovation___, less willing___, or about as willing___ as when you first heard about its being introduced here?

14. If you were to make an impartial judgment about whether or not this innovation will actually take hold here at the school, what would it be?
(Use the following categories to code response: Eventual Complete Success___; Eventual Partial Success___; Eventual Rejection___)

15. Have we left out anything important in talking about what has blocked or facilitated the teachers' efforts here to carry out the innovation? Y N OS

IF YES: What?

CONCLUDE INTERVIEW WITH EXPRESSION OF THANKS AND REASSURANCE OF ANONYMITY AND CONFIDENTIALITY.

CODES

CODE A: 5 = Very Positive; 4 = Somewhat Positive; 3 = Ambivalent; 2 = Somewhat Negative; 1 = Very Negative.

CODE B: 5 = Extreme; 4 = Great; 3 = Moderate; 2 = Little; 1 = None; DK = Do Not Know.

CODE C: Y = Yes; N = No; AMB = Ambivalent; DK = Do Not Know; NS - Not Sure.

CODE D: 5 = Great; 4 = Considerable; 3 = Some; 2 = Little; 1 = None; NS = Not Sure; DK = Do Not Know.

CODE E: 5 = Very Well; 4 = Somewhat Well; 3 = Neutral; 2 = Somewhat Poorly; 1 = Very Poorly; NS = Not Sure; DK = Do Not Know.

SPECIAL PROBE: The Nature of the Innovation? Plans for the Innovation? Specific Behavioral Changes: Help with the Behavioral Changes?

GENERAL CODE: Y = Yes; N = No; OS = Other, specified

A-2: The Classroom Observation Schedule

CLASSROOM OBSERVATION SCHEDULE

____
Date

____
Time

A. GENERAL OVERVIEW

1. Give a detailed description of the on-going classroom activities during the period of observation.
2. Sketch the room arrangement and activities during the period of observation.

B. MORE SPECIFICALLY, To what extent did the teacher(s):

1. make the materials existing in the room available to pupils?

not at all _____________________________ completely
1 2 3 4 5

NOTES:

2. have the room arranged into work areas?

not at all _____________________________ completely
1 2 3 4 5

NOTES:

3. utilize the room according to these work areas?

not at all _____________________________ completely
1 2 3 4 5

NOTES:

4. encourage or allow pupils to choose their own activities?

not at all _____________________________ completely
1 2 3 4 5

NOTES:

5. allow pupils to decide whether they wanted to work individually, in pairs or in groups?

not at all ____________________ completely
1 2 3 4 5

NOTES:

6. allow pupils to move freely about the room?

not at all ____________________ completely
1 2 3 4 5

NOTES:

7. allow or encourage pupils to interact with each other?

not at all ____________________ completely
1 2 3 4 5

NOTES:

8. allow pupils to decide how long they wanted to remain at a particular activity -- i.e., move freely from one activity to another?

not at all ____________________ completely
1 2 3 4 5

NOTES:

9. move about the room?

not at all ____________________ completely
1 2 3 4 5

NOTES:

10. try to work with as many individual pupils or groups as possible?

not at all ____________________ completely
1 2 3 4 5

NOTES:

11. try to act as a guide, catalyst, or resource person between pupils?

not at all ______________________ completely
1 2 3 4 5

NOTES:

12. try to act as a guide, catalyst, or resource person between pupils and the materials?

not at all ______________________ completely
1 2 3 4 5

NOTES:

CLASS SCHEDULE

____
Week

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30					
9:30					
10:30	RECESS				
11:00					
12:00	LUNCH				
12:30					
1:30					
2:30					

A-3: The Self-Administered Teacher Questionnaire

INSTRUCTIONS

Our purpose here is to obtain background characteristics of teachers. Please answer the following questions by circling the number next to the one answer which best specifies your reply.

1. How many years have you been a teacher?

1) 1 year
2) 2 years
3) 3 years
4) 4 years
5) 5 years
6) 6-10 years
7) 11-15 years
8) 16-20 years
9) 21-25 years
0) over 25 years

2. How many years have you taught in this school system?

1) 1 year
2) 2 years
3) 3 years
4) 4 years
5) 5 years
6) 6-10 years
7) 11-15 years
8) 16-20 years
9) 21-25 years
0) over 25 years

3. How many years have you taught in this school?

1) 1 year
2) 2 years
3) 3 years
4) 4 years
5) 5 years
6) over 5 years

4. In how many schools in this system have you taught?

1) 1 school
2) 2 schools
3) 3 schools
4) 4 schools
5) 5 schools
6) over 5 schools

5. On the average, how frequently do you work on school activities at home?

1) zero nights per week
2) one night per week
3) 2 to 3 nights per week
4) 4 to 5 nights per week
5) more than 5 nights per week

6. On the average, how much of your weekend is taken up with school work?

1) none
2) very little
3) some
4) a great deal

7. On the average, how frequently are you contacted at home about school matters?

1) once a week or less
2) 2 to 4 times a week
3) 5 to 10 times a week
4) more than 10 times a week

8. Where were your parents born?

1) both in the United States
2) one in U.S. and one foreign born
3) both foreign born

9. When were you born?

1) 1941-
2) 1936-1940
3) 1931-1935
4) 1926-1930
5) 1921-1925
6) 1916-1920
7) 1911-1915
8) 1910-

10. What was your father's MAJOR lifetime occupation?

1) education
2) scientific, professional (other than education)
3) manager, executive, or owner of large business
4) small business owner, manager
5) farm owner or renter
6) clerical or sales
7) skilled worker, foreman
8) semi-skilled worker
9) unskilled or farm laborer
10) other (specify____)

11. What was your mother's MAJOR lifetime occupation (other than housewife)?

1) none
2) education
3) scientific, professional (other than education)
4) secretarial, clerical
5) small business owner, manager
6) skilled worker
7) domestic or unskilled worker
8) semi-skilled worker
9) other (specify_____)

12. What was your father's highest educational attainment?

1) no formal education
2) some elementary school
3) completed elementary school
4) some high school, technical school or business school
5) graduated from high school, technical, or business school
6) some college
7) graduated from college
8) graduate or professional school

13. What was your mother's highest educational attainment?

1) no formal education
2) some elementary school
3) completed elementary school
4) some high school or business school
5) graduated from high school or business school
6) some college
7) graduated from college
8) graduate or professional school

14. In what type of a community did you spend the MAJOR part of your youth?

1) farm
2) village or town (under 10,000)
3) small city (10,000 - 50,000)
4) city (50,000 or more)

15. In what type of schools did you receive MOST of your elementary school education?

1) public
2) parochial
3) private

16. In what type of schools did you receive MOST of your secondary education?

1) public
2) parochial
3) private

17. At what type of college did you do MOST of your undergraduate work?

1) state university
2) state teachers' college or normal school
3) other public college or university
4) private university or college
5) private teachers' college or normal school

18. In general, what was the quality of your work when you were in college?

1) graduated with honors
2) above average
3) average
4) somewhat below average

19. At what type of college did you do MOST of your graduate work?

    1) No graduate work
    2) state teachers' college or normal school
    3) other public college or university
    4) state university
    5) private university or college
    6) private teachers' college or normal school

20. What plans do you have for future formal education?

    1) No plans
    2) Will take courses, but not for a specific degree
    3) Will study for a master's but not a doctorate
    4) Will study for a doctorate

21. How many semester hours of education courses did you have as an undergraduate?

    1) none
    2) 1 to 10
    3) 11 to 20
    4) 21 to 30
    5) 31 to 40
    6) 41 to 50
    7) 51 to 60
    8) more than 60

22. How many semester hours of graduate work have you taken?

    1) none
    2) 1 to 10
    3) 11 to 20
    4) 21 to 30
    5) 31 to 40
    6) 41 to 50
    7) 51 to 60
    8) more than 60

23. What is the highest academic degree which you have received?

    1) certificate
    2) bachelor's
    3) master's
    4) master's plus 30 hours
    5) doctor's
    6) professional degree (e.g., LL.B.)

24. Which category best represents your current salary with respect to school?

    1) Less than $5,000
    2) $5,000 through $7,499
    3) $7,500 through $9,999
    4) $10,000 through $12,999
    5) More than $13,000

25. What is your marital status?

    1) single
    2) married
    3) other

INSTRUCTIONS FOR QUESTION 26

Please write in the one code number [1 = I would not want to; 2 = I am not especially anxious to; 3 = I have some desire to; 4 = I would very much like to; 5 = I am extremely anxious to] which best represents your answer for each of the statements below.

26. How desirous are you of doing the following?

    a) Become a specialist attached to a central office. ___

    b) Become an assistant principal. ___

c) Become the principal of an elementary school. ___

d) Remain a teacher in this type of school for the rest of my educational career. ___

e) Remain a teacher in this school system for the remainder of my educational career, but move to a school in a "better neighborhood." ___

f) Remain a teacher at my present grade level(s) for the remainder of my educational career. ___

g) Obtain a higher paying teaching job in another school system. ___

h) Obtain a higher paying position outside the field of education. ___

INSTRUCTIONS FOR QUESTION 27

For each of the items found below, please write in the one code number [1 = very dissatisfied; 2 = somewhat dissatisfied; 3 = neutral; 4 = somewhat satisfied; 5 = very satisfied] which best represents your answer.

27. How do you feel about the following items?

a) The level of competence of most of the other teachers in this school. ___

b) The method employed in this school for making decisions on curriculum matters. ___

c) The method employed in this school for making decisions on pupil discipline matters. ___

d) The attitude of the students toward the faculty in this school. ___

e) The manner in which the teachers and the administrative staff work together in this school. ___

f) The cooperation and help which I receive from my superiors. ___

g) The educational philosophy which seems to prevail in this school. ___

h) The evaluation process which my superiors use to judge my effectiveness as a teacher. ___

i) The level of competence of my superiors. ___

j) The adequacy of the supplies available for me to use in my teaching in this school. ___

k) The academic performance of the students in this school. ___

l) The amount of time which is available to me while I am at school for my personal professional growth. ___

m) The extent to which I am informed by my superiors about school matters affecting me. ___

APPENDIX B: DOCUMENTS

Many private school documents were collected and examined during the course of our data collection, and several pieces of private correspondence were exchanged between the project and officials of the school system. In this appendix we present several of the most important documents and pieces of correspondence:

(B-1) The Letter to Higher Administrators Requesting Cooperation to Do the Study

(B-2) The Director's Initial Description of the Innovation to the Teachers (The November Document)

(B-3) The Director's Expanded Document Subsequently Passed Out to the Teachers (The January Document)

(B-4) The Announcement to the Teachers at the End of January Requesting That They Begin to Make Efforts to Implement the Innovation, and a "Suggested Daily Program Schedule"

We have carefully reproduced the original documents, as they stood, adjusting them only to conform to standards for margins and to maintain anonymity. Any irregularities, therefore, were parts of the original documents.

B-1: The Letter to Higher Administrators Requesting Cooperation to do the Study

HARVARD UNIVERSITY

GRADUATE SCHOOL OF EDUCATION

Roy E. Larsen Hall, Appian Way
Cambridge, Massachusetts 02138

October 21, 1966

TO:

FROM: Neal Gross, Professor of Education and Sociology, Harvard University

RE: Study of the process of innovation in schools.

The general objective of the study is to shed light on the process of innovation in schools. There has been considerable speculation about, but little systematic examination of, this process. My associates and I at the Harvard Graduate School of Education believe that research of this kind is needed to obtain a realistic understanding of the kinds of problems teachers and administrators encounter in effecting change and in understanding how they attempt to cope with them. We believe that the most productive way to explore this matter is to observe the day-to-day activities that take place in schools engaged in innovation and to examine the process of introducing educational change from the viewpoint of those participating in it. The innovating environment of the School, we believe, offers a very valuable opportunity to examine the process of change and to learn from the experiences of those directly involved in it. It will be one of several in the area involved in the study. As a consequence of the research encompassing a variety of school situations, we hope to be able to isolate a set of general and common factors which need to be taken into account in efforts of school systems to introduce educational innovations as well as to determine special circumstances that may be relevant to unique situations. It is our anticipation that the conclusion of our research will be of practical value to the participating school systems and also of value to school systems in general in their efforts to introduce change.

Needless to say, any report of our findings will be prepared in a manner that would guarantee complete anonymity to the systems and schools involved in the study; in addition, we can assure all who participate that any information they provide us will be treated in a completely confidential manner and that all necessary precautions will be taken to assure the anonymity of the data they provide. We also would like to assure the faculty that we believe, as they do, that the on-going education of students is a first concern. For this reason we will attempt to be at all times as unobtrusive as possible. Mr. Joseph Giacquinta, my research associate, who will be at the   School, is well aware of the problems confronting teachers. He is a former teacher and is currently studying for his doctorate in the sociology of education. He will avoid imposing on the time of members of the faculty as much as possible, but I also hope they will be willing to share with him, at their convenience, their insights and ideas and allow him to observe the daily life of the school.

Both of us wish to assure the faculty that our function is simply to learn as much as possible about the process of innovation. We also wish to emphasize that our role in no sense should be conceived as one of evaluating school personnel or programs or as serving as consultants to the staff.

When our study is completed we will, of course, be glad to share whatever findings emerge from the study. We would hope that as a result of your professional cooperation that there will be some addition to the limited knowledge now available about the process of introducing change into schools. Our ultimate objective is indeed the same as yours -- the improvement of public education.

B-2: The Director's Initial Description of the Innovation to the Teachers

(The November Document)

I. Purposes of the Innovation

1. One basic aim is to build an environment in which children are, within very specific limits, free to follow their own curiosity, to explore as deeply as they are capable of exploring those ideas and areas of learning which are of greatest interest to them, an environment in which, as much as possible, they are not tied to a rigid schedule created for the convenience of the school rather than the children themselves. This does not mean (as we shall explain below) that children are simply allowed to do whatever they please or run wild - quite the contrary. But it is, we hope, a place to which children will want to come and in which they will find it possible to look upon the act of learning as something exciting and pleasurable rather than as some mysterious duty that their parents and the school wish them to undergo.

2. A second basic aim is to create an environment in which children of a fairly wide age range and of heterogeneous achievement levels can become engaged in the process of learning at whatever level of competence they happen to be in the various (loosely defined) subject areas. The children then move at their own best speed and using their own most appropriate styles from where they are to the farthest point they can attain in the course of a year. There is to be no holding a child back because he is moving into material normally considered as belonging to some higher grade or level (such as junior high).

3. A third aim is to create an environment in which, to as large

a degree as possible, the children are responsible for their own learning -- that is, either alone or in groups they ultimately will be capable of finding their own problems and working their way through to some tentative answers. Thus, in so far as it is possible, the material in the classroom should be self-instructional, not in the sense of programmed instruction but in the sense of materials that are tempting and tantalizing, materials that ask questions but do not provide any immediate answers. Games (such as the Dougherty-Lesser Math games), animals, balance beams, microscopes, ESI cartridges and films on the Eskimo, records and cartridge tapes (and tape recorders), intriguing books, as well as art and music materials, cuisinaire rods, printing presses, etc.

4. Another aim is to build an environment in which, as a matter of normal daily routine, children help other children to learn - or to put it another way, a situation in which more skilled children become assistant teachers and/or the peer group forms a self-instructional unit, with all children learning from each other. Children teaching other children, clearly, would not always mean older children teaching younger children, since in a heterogeneous group many of the younger children will be ahead of the older ones in some areas. Similarly, not all the teaching will be done by the "brighter" or the verbally talented children, since much of the material will not be verbal but manipulative or will employ the graphic and mechanical arts.

5. Another aim - and just as clearly one of obvious and crucial

importance - is to alter the traditional role of the teacher. For far too long now we have been asking teachers to perform an essentially impossible task - or at least a task impossible for all but the most gifted and inexhaustible of human beings (and such paragons are rare). We have been asking a single person to be totally responsible for the education of up to 35 children in something called a "class", to handle all of the individual idiosyncrasies of those 35 children, their differing abilities, talents, levels of achievement, personality problems and virtues. We have demanded of teachers that they should treat each of these children as individuals and to devise a program that will suit each child's individual needs and capacities.

In the case of elementary teachers, we have not only told them this but we have simultaneously told them that they should keep all of the children gainfully occupied throughout a full six hour day (at best). If they pull a smaller group out of the larger 35, we of course assume that all of the remaining children will not be doing just busy work but that somehow the teacher will invent all sorts of wonderful learning experiences for them while she is tending to that small group. In addition we assume that this teacher is, of course, an expert in every conceivable subject from reading, etc., on down to music, art and foreign languages. To assist the teacher in doing all this, we provide her with a few battered books and $25.00 per child for all "materials" for one whole school year.

In the secondary schools, we expect a teacher to remain inventive and full of instructional vigor while a succession of 150 students march in and out of his or her room in strict periods of 45 minutes. And again we provide $25.00 worth of materials for each of those students to learn with. In general we have given these teachers no time at all to think or plan or talk together or to try new and possibly better ways of getting children involved in the process of learning. And as a crowning achievement, we manage to underpay them as well.

True, in recent years, some newer approaches have been invented or - re-invented - in an attempt to relieve this poor, harassed creature - team or cooperative teaching (or at least the idea that a teacher should not be required to carry all of the burden), the idea of non-professional aides, auxiliary and specialist teachers in particular subject areas, etc. But the basic job has still remained in most cases, and the burden is still primarily on the teacher.

We do not expect that the teacher's burdens will be removed or that the job will suddenly become all fun and games. Nor can we think of any ways by which the role of the teacher could or would be made any less crucial to the educative process than it is now. Indeed under this system the job may become in some ways more demanding. But we do want to make the job much more possible and much more professional by doing the following things:

--By transferring as much of the instructional and "motivational" responsibilities as possible to the materials with which the room is filled, to force the materials (and the makers of materials) to be intriguing, ingenious, catchy, materials that can be used by children for exploration and learning on their own (not many of these exist as yet).

--By building a total classroom environment (including operating procedures) that essentially says to a child, "Here is a place - hopefully a rather fascinating place - full of interesting things to do. There are toys, games, books to look at and read, blocks to build with (for younger types), microscopes to look at small things with, animals to enjoy and wonder about, etc. You are going to have to behave yourself - no nonsense about that. But for a large part of the day, you are going to be able to choose what you want to do. If you want to paint a picture, go ahead and do it. If you want to see things through that microscope, go ahead and do that. If you want to play a card game with several of your pals, do that, or if you want to sit in the library corner and read a book, that's fine too. We would like you to keep busy, but how you do it is going to be largely up to you. Mr. X (Miss Y) is still your teacher, and he'll be in the room to answer any questions you have, to help you get started - help you move along on whatever it is you are doing. There will be a lot of other "teachers" coming in and out of the room. Some of these teachers will be particularly interested in the science material, some in the reading books or the art materials or music. They will be glad to help you and may often suggest things for you to do. If you see any of them beginning to do something interesting, feel free to join whatever group he's working with, and feel free to ask those other kids about what they're doing or ask them questions if you don't understand something. Mr. X and all those other "teachers" will, every once in awhile, suggest something for the whole class to do together - look at a movie and talk about it, go on a trip somewhere, play some math games on the blackboard, or perhaps put on a play. No one is going to shoot you if you choose not to join in on these activities, but if you give it a try, you might find it's not so bad after all. Now don't get the idea from all of this that you aren't engaged in a serious business. It may seem like a great deal of fun, but Mr. X is also going to be worrying about whether you and the rest of the children are learning to do some of the things that everyone has to do in this world - like how to read and use numbers and what the world is like and how it got that way. So maybe at times Mr. X or one of the other teachers is going to sit you down and suggest that there are some things that you - and maybe some of the other children too - ought to be brushing up on. Some times you are going to have to take tests as well. So you can't always do just what you want to do. In fact, you will be allowed to do what you want to do only if you are obeying the basic rules - like not hitting the other children or not wandering out of the school or not talking tough to Mr. X. Otherwise, the school is yours.

We would hope that by this means teachers - although still in quite complete control of the class environment - will be able to move freely amongst a group of busy children, picking out those who need special help in any particular subject either individually or in small groups, to encourage some children to forge ahead, establishing group projects and making sure that children develop a tendency towards finishing what they set out to do. In many ways this will be a harder job for many teachers than just following the lesson plans in the book. But it is also a much more professional and creative job for a teacher to be doing.

II. Some Suggested Operating Procedures.

1) No classroom will be set up as prescribed by the innovation unless and until a teacher decides he or she would like to give it a try and until and unless there has been a very careful planning process (including the selection or preparation of materials) involving the teacher(s), the assistant director, the subject specialists (and outside consultants if necessary and desirable) and - very important - the instructional research people who will be attempting to find out what the results of this experiment are.

2) The process of moving into this innovative situation should proceed with deliberate speed. Such a classroom cannot operate unless and until the materials are ready and in the classroom and unless the teacher feels that the physical set-up of the room is such that the program could begin working.

3) Not only the teacher but the children will have to be moved slowly into this kind of a situation. Children (except perhaps young children who have had no experience with school) will not instinctively be accustomed to or know quite how to handle this kind of freedom.

It will be quite a new kind of school experience for them, and they will have much to unlearn. Younger children may well be easier to handle since they can be introduced to this kind of an atmosphere before they have acquired habits and attitudes that will have to be unlearned.

4) A class such as this should have no more than 25 children heterogeneously grouped with an age span of 2-3 years and an achievement spread of 2 - 3 grade levels (perhaps even more). There must be a teacher who has primary responsibility for the classroom, with the other teachers (art, music) and specialists acting as occasional teachers and wandering consultants to the children (and to the teacher or teacher and assistant teacher).

5) The children should be told that upon their arrival in the morning (hopefully not lined up outside and marched in) that they can go directly to whatever they choose as their initial activity (no opening exercises - they just enter the room and start working). Similarly, children should not be forced to go out to recess if they choose not to or to have juice and crackers at some specified time. We might even experiment with letting them eat lunch when they want to. There will - as has been said - be times during the day when it would be convenient for all of the children to be doing the same thing at the same time - when the music teacher arrives to give recorder lessons, or when a film is around that can only be shown on a conventional projector and therefore requires a darkened room (plus all the noise and confusion that the ordinary projector makes and causes) or when the art teacher arrives to give college instruction.

However, it should be made clear to the children that when this kind of thing happens, they may join in if they want to, but that no one is going to force them to. This then puts the burden on the music teacher or the film maker or the art teacher to make the stuff or the instruction so fascinating that the children cannot help but be drawn into the activity. The same rules should apply if a similar situation arises, say, in Madison project or Illinois or Cambridge math - If the teacher feels tempted to bring the whole class together and elucidate some fascinating mathematical topic or to give "instruction" in Cuisenaire rods, this temptation should be resisted (at least, let's try to resist it and see what happens). Much better perhaps to ask for volunteers or round up those children who would like to work with math that morning (children have been known to come up to a teacher and plead for such sessions) and let those who wish to join in do so. Those who choose not to join in are then treated separately by the teacher - either as a small group coerced into doing some math if they are falling a long ways behind or as individuals "taught" either by the teacher or another child who is eager to pass on the newly acquired skill.

6) There are - obviously - going to be a strict set of behavioral rules for the children (violations will bring a lessening of the freedom that the more responsible children enjoy - offenders will be forced to sit in a corner and look at old educational films or read "Dick and Jane" or some equivalent torture). Some of these rules would be:

--You are not allowed to strike, curse at, punch, jab in the ribs or otherwise inflict injury on your classmates or teachers.

--You are not allowed to interfere with another child's activities, either by grabbing his microscope or yelling in his ear when he is trying to read or by any other means. If all of the microscopes (or cartridge film projector or mathematical games or whatever) are being used, then you will have to wait your turn.

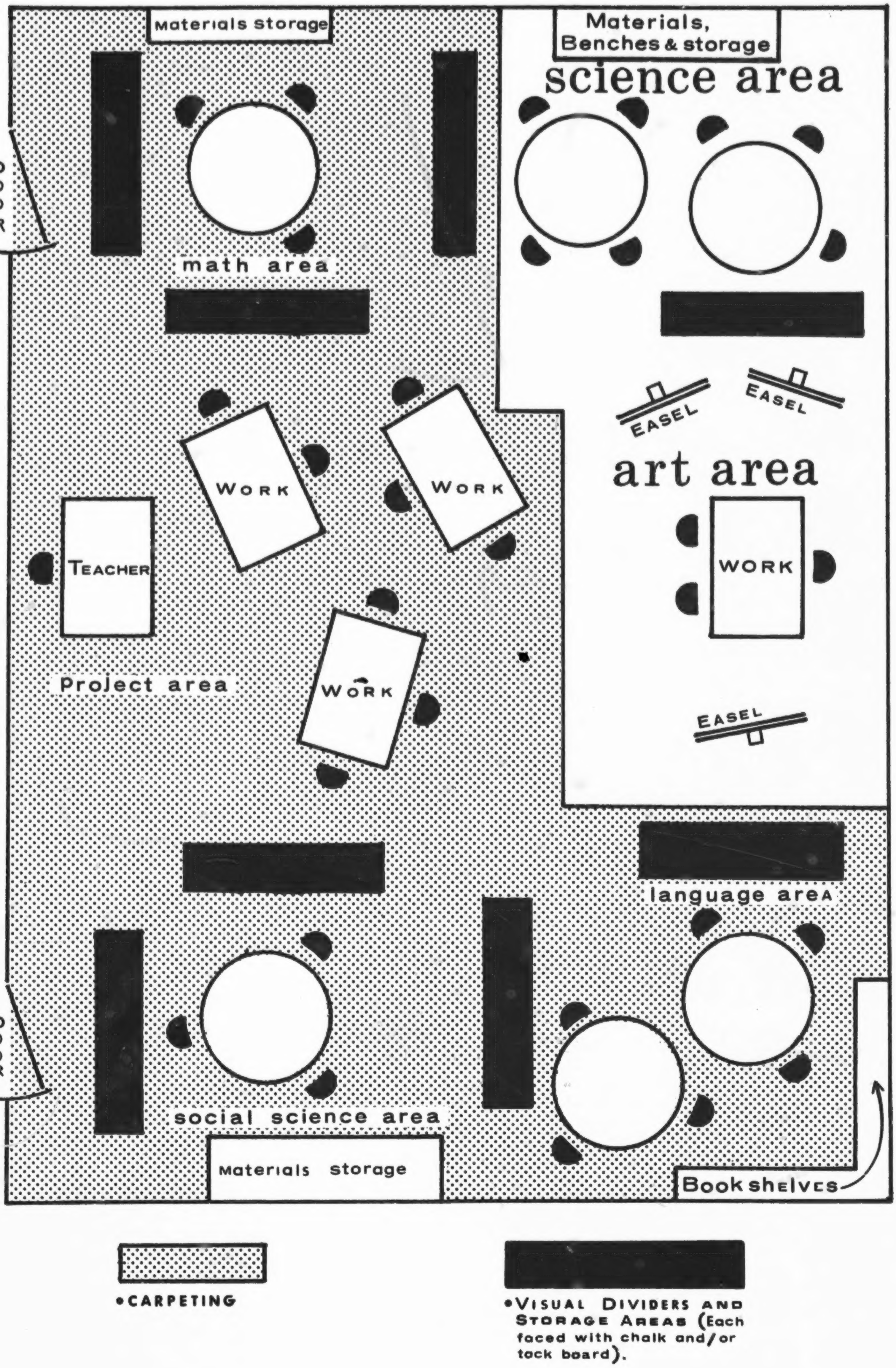
--If there is a dispute or argument that you cannot iron out quickly by yourselves, the teacher (or nearest adult) will arbitrate and whatever he or she says goes.

--You are not allowed to steal, break or otherwise damage materials or equipment (unless the teachers specifically says it is yours to take home and do whatever you want with it.)

--Although a basic rule of this classroom is that a variety of activities can all be going on at the same time and therefore you are free most of the time to choose what you want to do, this is a place in which everyone is responsible for being busy and productive. It is not a place for horsing around and wasting your time and everyone else's. We do not mean by "busy and productive" that you have to be bustling around all of the time - sitting quietly in a corner reading a book is being quite busy and productive, and often when you are just sitting and staring out of the window you can be thinking great and useful thoughts. But there are serious things going on in this room, and you are going to be expected to keep moving intellectually and to be learning all sorts of things.

--By that last statement we do not mean that you or the rest of the children or the teacher must be solemn and serious all of the time. We expect the noise level of the class to be high, and laughter is one of the most legitimate of activities. We expect only that the laughter and the activity will not be excessively trivial or get too far out of hand.

7) There follows here a rough and tentative suggested plan for the physical set-up of this kind of a classroom (to be altered as necessity and the teacher's tastes dictate) -


Materials storage
Materials, Benches & storage
science area
DOOR
math area
EASEL
EASEL
art area
WORK
WORK
TEACHER
WORK
WORK
Project area
EASEL
language area
DOOR
social science area
Materials storage
Book shelves
•CARPETING
•VISUAL DIVIDERS AND STORAGE AREAS (Each faced with chalk and/or tack board).

B-3: The Director's Expanded Document Subsequently Passed Out to the Teachers

(The January Document)

I.

ASSUMPTIONS

(Preliminary Platitudes)

1) What American society most requires of its schools in this day and age is that they assist children to become independent, responsible, thinking adults.

There are, of course, many central assumptions which could and undoubtedly do underlie any educational system. We have selected this one, however, because we believe that this is the one conscious function that a school system can undertake with some chance of success.

In choosing this as our leading assumption, we hope we are facing up to the fact that formal "school" is only one of many modes by which children "learn" or are shaped or become acculturated in a 20th century post-industrial society. Indeed, the available evidence -- as well as common sense -- would indicate that school is, in fact, one of the minor shaping forces when compared to the effectiveness of social class, ethnic origin, the family, the peer group and perhaps even the popular arts such as television, films, the press, popular music and "teen-age culture."

It is for these reasons that little will be said in this document about the role of the school in the inculcation of "values" -- civic virtue, patriotism, moral standards, religious attitudes and the like. We do not believe that the school is utterly powerless to affect children in these areas -- especially since the school by its existence and methods of operation constitutes a set of models and objectives for all children whether we or they like it or not. It is, rather, that we feel that the effect of school in these areas will be minimal at best. A sick society is going to produce a sick educational process, (Nazi Germany and its highly effective school system) while a relatively healthy society will have a better chance of producing a process with a healthy amount of diversity and freedom.

We do believe, however, that as contemporary society becomes increasingly complex and increasingly dependent upon more abstract symbolic processes, the ability to use one's mind with clarity, power and delight becomes increasingly crucial to the survival of the individual in society and to the survival of society itself.

2) It is not possible for any human being in the middle of the 20th Century to comprehend in any meaningful fashion more than a small fraction of the immense body of knowledge and the intellectual and technical skills available to man in the contemporary world.

The paramount problem that faces the American educational system at this point in time, cannot be how best to transmit the accumulated knowledge of the race to individuals in succeeding generations. The traditional educational approach that stresses "coverage", i.e., the storage and appropriate retrieval of large quantities of specific information, is no longer a workable or useful approach. We do not mean here that "knowledge" or "information" or "facts" are useless. What we do mean is that an educational system that devotes much of its energy to insisting that children acquire a certain set body of probably obsolete knowledge, a system which then judges children by how much of that knowledge they can retain and repeat is not using its own brainpower or the brainpower of its students wisely or well.

3 It is no longer possible for human beings to construct a series of "correct" answers or interpretations of observed facts that all thinking people can agree to.

Although this may or may not have been true in the past, recent history suggests that large-scale changes in basic knowledge -- and in our ways of looking at what we think we know -- are occuring ever more frequently. This is particularly true in the natural and social sciences, but it is true in other realms as well. We are beginning to see that our theories and beliefs are at best little more than approximations of some elusive set of ultimate "truths", that everything is "subject to revision" as we gather more and disturbingly new information in every field and develop new, more sophisticated and increasingly more tentative hypotheses based upon that new information. We are thus forced more and more into seeing the futility and downright error of attempting to set forth for students a series of "right answers" or "basic set of fundamental and important concepts" or the "basic structure" of a field that every child should, after 12 years of schooling, have indelibly printed on his brain ready for use.

If we attempt to construct such a series of right answers or basic structures, we rapidly discover that agreement is difficult if not impossible to reach (could we all agree, for instance, that men everywhere and at all times have had basically the same "human nature"?).

We also discover that many of our cherished "right" answers turn out to be based on totally obsolete information or wholly inappropriate and false interpretations. (Columbus discovered America in 1492, every word of which is wrong or subject to substantial if not total revision).

There are, of course, many large, important ideas, modes of thinking or models of reality that are extremely productive and with which children should become acquainted in some fashion. These would include many of the hypothetical explanatory constructs upon which our contemporary intellectual world is based, such as the idea of biological evolution, the model of the atom as set forth by Bohr, Rutherford and Schrodinger, the conceptions of time, space, energy and matter of Einstein's general and special theories of relativity or the model of the mind as proposed by Freud. Nor have we any desire to suggest that children should not become acquainted with the insight and pleasures afforded by the arts and humanities -- by a Shakespeare, a Bach or Handel, a Michelangelo or Picasso. Indeed, they should.

What we _are_ saying is that we are being forced -- often against our will -- to surrender our cherished idea that an educated human being is a person who has command of a set and necessarily quite limited by of facts, ideas and skills at the end of 1, 2 or even 16 years of schooling. In the first place, it should be apparent to all of us that under the present system of forced storage of information (conventional teaching) and forced retrieval under stress (tests that ask for the recall of facts), most children simply do not retain information. Indeed, they tend to forget is as quickly as they can once the test is over or once the high school or college diploma is obtained. And this is particularly true of the conventional textbook (a series of pre-digested facts and probably out-dated interpretations) is used by teachers in the typical chapter a day, memorization and testing for right answers way.

This, of course, brings into question the whole traditional idea of what a "curriculum" is or should be. Clearly, something must be used by the school and its teachers as the basis for getting children involved in the process of learning, even if children are to be given a wide choice concerning what they will get involved in. A school and its teachers have to decide, for instance, that the children will study the nature of the physical universe and that they will not study how to make a zip gun or how to steal bicycles. Thus, in a real sense, the school and its staff (or the school & parents & the community at large) are inevitably going to make the basic educational decisions.

But we believe that the world of the mind these days, the world of intellectual and aesthetic pleasure, is too large, too exclusive, too exciting to be encompassed within the range of our conventional curriculum guides and conventional educational materials such as textbooks.

The proper job of a "curriculum" therefore is not to decide what facts are going to be "covered" and what the "right" answers are going to be, but to provide a broad array of valuable, intriguing materials that is highly relevant to the lives of the children themselves. The task of the school and the teachers then becomes how best to guide and assist the children to become involved in the materials, how to make the children's own explorations and discoveries possible.

4 It is not how much we know that is important but what we are able to do with what we know.

Information itself is all too prevalent, and we are already building computerized retrieval systems to provide us with the information we need when we need it. But all of this information gathering is wasted unless individual people are equipped to use it in the performance of tasks that make valid intellectual, aesthetic or social (or all three) sense. If, when we have called for or accumulated some batch of information, we have not the slightest idea of how to manipulate it, how to make sense of it, how to make it work for us and serve our purposes, then we are simply engaged in a foolish and futile enterprise.

At the most primitive level, we are here talking about what are often called "skills," i.e. the "skills" of being able to read the written word, or writing, of performing rudimentary operations with numbers, etc. All of these things are, of course, eminently desirable.

But at some more sophisticated level, we are speaking of far more important things -- ways of handling complex masses of information, of generating and manipulating abstract ideas, of sensitizing oneself to and enjoying magnificent works of art, in short, ways of using one's available mental and emotional faculties towards both personal and socially satisfying ends.

It is this kind of "skill" -- essentially the ability to make connections between things and to follow logical sequences, in other words the ability to "think" -- that is becoming increasingly important to both individuals and to contemporary society. As we all know, the day is long since past when a straightforward command of the 3 R's could enable a person to function adequately in a complicated industrial world. Indeed, much of the furor over education these days stems from a rather sudden and annoying realization that the human products being turned out by the schools have simply not been adequate to the tasks being thrust upon them by that great world out there. Much of this fuss, ironically enough, has been created by the colleges and universities, which in general operate on educational principles far more antediluvian than those of the public schools. But more importantly, fuss has also come from business and industry who clearly recognize that, while the public system can hardly be expected to provide highly specialized training, the schools might well be expected to produce people sufficiently equipped intellectually to be able to adapt well to a wide variety of new situations and experiences.

Indeed, business and industry have of necessity created for themselves a vast educational system at least equaling if not surpassing the public system in size. Most of this education is post-high school training for specific jobs, but much of it is general education as well.

Perhaps one of the most interesting developments here is the recognition by business and industry that, with automation and the constant shifting of needed job skills, training for specific skills and specific jobs is rapidly becoming obsolete. What is really important now is training (or education) that prepares people to handle many different kinds of tasks and to be able to shift easily and quickly to new tasks as the situation may require. Especially important as technology continues to evolve rapidly is the ability to recognize new problems as they arise and to solve those problems imaginatively. In short, what is increasingly needed by higher education, business and industry is *general intellectual skills* -- again essentially the ability to put one and one together and to solve problems, many of which have not as yet been discovered or even thought of.

These types of general skills we know considerably less about than the primitive ones of reading, writing and arithmetic. Academic psychology -- from whence all our answers must ultimately come -- has only recently found itself in a position to begin to investigate systematically how our cognitive processes work and especially how they develop in children. Cognition (the study of how we "know" anything at all) has, of course, been the subject of philisophical and psychological debate for centuries. But the systematic and scientific study of the *processes* by which our minds -- and especially the minds of children -- operate is a relatively new field.

Most of these investigations are taking place (as they should) in the laboratory or in laboratory settings. That is, the investigators are interested in discovering and tracing the processes in as raw, uncluttered a form as it is possible to get them. This is what Bruner has called the "random encounter" between a child and the tasks he is to perform in order that the psychologist may grasp what is happening inside the child's head.

This is a very important and very necessary way of finding out some very important and very necessary things about how children think and learn. But it is quite a different thing from the non-random, more educationally relevant encounter between a child and some (hopefully) meaningful material that takes place in the instructional process.

What we really need here is a special group of people, made up of psychologists and specially trained school people, to study the very particular set of problems that occur in the process of assisted learning -- what is going on in the minds of children (and teachers) in the classroom as they move through the instructional process and especially what happens when that process is altered, for instance, in some of the ways described in this document. To refer to Bruner once again the problem is not so much how to apply in schools what we already think we have learned in the laboratory, but rather how to formulate appropriate questions and hypotheses as they arise in an instructional context.

Perhaps what we are really talking here in some ultimate sense is a Center or Institute for the Study of Instruction. While waiting for this miracle to occur, we intend to make our own contributions to the advancement of this kind of knowledge through our own Instructional

Research Group, although we know full well that this can never be a substitute for the full-scale, fully staffed Center devoted solely to this problem.

We do know a few, tentative things, however, with which we can begin to re-examine and re-formulate what we are doing. We know, for instance, what some of the rules of logical thinking are. We know, too, a little about how these rules have been applied in the past and are currently applied, especially in the sciences. Our situation, therefore, is not hopeless. We can even set a few of these approaches down, always realizing that when we set these forth as objectives we are assuming that they are being used on content - although in many cases that content or subject matter may well be selected by the students themselves. We outline what some of these "higher skills" might be under the Objectives section of this paper.

5 Human beings tend to "learn" best those things which they feel to be relevant to their own lives and to their own interests, those things which they feel that they themselves have in some measure chosen to learn.

If we look at ourselves, we will probably agree that this is certainly true of all adults. We feel that it is equally true of children, even very young children. This does not mean, however, that we should let children decide in all cases what they are going to study in school. Children are just as capable as adults of devoting a great deal of time to the sheerest trivia (what was that about arrogance?)

What we do mean is that within very broad limits the range of quite justifiable alternatives is so large that one body of content or one avenue of approach into a subject is most often just as good as another. Some examples:

In the natural sciences, there are uncountable ideas of major importance - the notion of biological, and especially human, evolution, the structure and operations of the atom, the nature and origins of the solar system and the universe, the nature of chemical bonds, the nature and operations of the human mind and body, the study of the earth and the sea, and so on endlessly. Who is to say that it is "better" to study the nature of the atom than the question of the origins and development of man? Does it in the longest of runs really make that much difference if a child becomes captured by one rather than the other? We would hope that he might become acquainted with both and with all of the others as well. But we are trying to be sensible.

In the social sciences, the case for a rigid, pre-determined curriculum is even harder to make than in the natural sciences or in mathematics, where at least attempts have been made to set forth some logical sequence of what must be learned first before something else can be learned (although there are apparently no hard and fast rules about it). Attempts to establish such logical sequences or sets of basic concepts for the social sciences have proved relatively futile. Again, however, this does not disturb us greatly, for the range of available data is enormous and unavoidably fascinating - if it is not denatured by being crammed into a textbook. We are finally beginning to get some first rate material to work with -- everything from a complete ethnographic film record of a single Eskimo group through vast collections of original historical documents on down to the whole world waiting outside the classroom. Again, who is to say that a study of the American Revolution (even if it is done only once rather than five times) is preferable to a study of the origins and structure of human society?

The dangers of rigidly prescribing what should be studied in the arts and humanities, where individual taste is rampant, are too obvious to merit consideration. Except to point out that while we may feel strongly that children should be exposed to "King Lear," to "Messiah", the B Minor Mass, to the ceiling of the Sistine Chapel, to the Symphony of Psalms and perhaps even in extreme circumstances to "Silas Marner," our ability to destroy any hope of arousing interest in these great human experiences so far outstrips our ability actually to arouse that interest that we had better be quite careful. Perhaps the way into "Romeo and Juliet" is through "West Side Story" or the way into "Messiah" is through the Rolling Stones. Perhaps the best way to encourage children to read is to encourage them to read "Batman" or books about the National Football League. It might be wise for us to maintain a very open mind in these matters.

Perhaps one of the major clues to success here is the hunch (verified by common sense, at least) that both children and adults will always be attracted to and learn most easily about those things which seem to them to have some honest relevance to their lives, things which appear to them to be important. If we wish children to become intrigued by a "Lear", then it behooves us in some ingenious way to demonstrate its possible relevance to the life the children see about them. If we cannot do this, we have already lost the battle. We are wasting both their time and ours.

What emerges from all this, we feel, is a belief that the problem is not so much what we should ask to children to sink their intellectual teeth into -- there is plenty of "what" -- but rather how best to get children involved. The problem thus comes down to materials and methods (and to teachers who are willing to throw away the book and pay attention to the students). How, in other words, to so arrange our facilities and our instructional process so that children have an enormous range of valuable and relevant material to engage their minds and energies and a wide range of choice about what, at any given moment, they will devote themselves to.

6) It is possible as well as desirable to devise an educational process that will encourage children to become increasingly responsible for their own learning.

If we claim, as we do, that children will learn more eagerly and much better those things which are relevant and self-selected, then clearly we are saying, too, that children will of necessity have to shoulder an increasing share of the responsibility for their own schooling.

By "responsibility" here we mean the opposite side of the venerable coin of "freedom". We do not expect, for instance, that every child will simply do as he or she pleases all day in school. While we are desirous of making the process of learning pleasurable, we still intend that it be a process of learning and in that sense a very serious business. Indeed, we would assume that, to a large extent, the degree of freedom and choice extended to a child will depend upon his exercise of responsibility -- in not belting other children or his teachers, in having some minimum respect for school property and the rights of others, and if possible some minimum respect for himself as a human animal capable of being involved in the process of using his intellectual and aesthetic faculties. True, the basic responsibility for providing a humane and intellectually intriguing environment rests squarely with the school. But as children grow older and, hopefully, become increasingly involved in the instructional process, we would hope and expect that they will demand and be capable of assuming that larger share of educational responsibility, more capable of wisely and imaginatively exercising their freedom of choice.

This, to us, is a clear necessity, for if we seriously hope to produce or enable children to become independent, responsible, thinking adults, then we have to give them the opportunity to think, to be independent and to be responsible for their own actions and beliefs. If we claim this as a goal and then do not increasingly turn over this educative responsibility to children as they grow older, we are simply being hypocrites operating in a fashion that is going to produce more rote memorizers and exam takers, i.e. human beings who are much less than they should be.

7. The profession of the teacher -- as it is presently conceived and practiced -- is neither a sensible nor a possible one to expect large numbers of people to practice successfully.

For far too many years now, we have been asking teachers to perform an essentially impossible task -- or at least a task impossible for all but the most gifted and inexhaustible of human beings (and such paragons are rare). We have been asking a lone individual to be totally responsible for the education of up to thirty-five children in something called a "class", to handle all of the individual idiosyncrasies of those thirty-five children, all of their differing abilities, levels of achievement, peculiar talents, all of their various virtues and problems. We have demanded of teachers that they should treat each of these children as individuals and devise a program that will suit each child's individual needs and capacities.

In the case of elementary teachers we have not only required all this of them but we have simultaneously told them that they should keep all of their children gainfully occupied throughout a full six hour day. If they pull a smaller group out of a larger thirty-five, for reading instructions, we of course assume that all of the remaining children will not be doing just busy work but that somehow the teacher will invent all sorts of wonderful learning experiences for them while she is tending to that small group. In addition we assume that this teacher is, or course, an expert in every conceivable subject from reading, math, science, social studies on down to music, art and foreign languages. To assist the teacher in doing all this, we provide her with a few battered books and $25.00 per child for all "materials" for one whole school year.

In the secondary schools, we expect a teacher to remain inventive and full of instructional vigor while a succession of 150 students march in and out of his or her room in strict periods of 45 minutes. And again we provide $25.00 worth of materials for each of those students to learn with. In general we have given these teachers no time at all to think or plan or talk together or to try new and possibly better ways of getting children involved in the process of learning. And as a crowning achievement, we manage to underpay them as well.

In recent years, it is true, some newer approaches have been invented or -- re-invented -- in an attempt to relieve this poor, harassed creature -- called a teacher -- team or cooperative teaching (or at least the idea that a teacher should not be required to carry all of the burden), the idea of non-professional aides, of auxiliary and specialist teachers in particular subject areas, etc. But the basic job has still remained in most cases, and the burden is still primarily on the teacher.

No matter how vigorously we innovate, we do not expect that the teacher's burdens will be removed or that the job will suddenly become all fun and games. Nor can we think of ways by which the role of the teacher can or should be made any less crucial to the educative process than it is now. Indeed, it is more likely that the job will become in many ways even more demanding. But we do want to make the job much more possible and much more professional. Some of the things we hope to do are listed under the Objectives section of this paper, especially the things listed under No. V.

8. The institution called "school" as we know it today is rightly and of necessity undergoing vast changes not only in the instructional process that occurs inside its walls but in its relationship to the world outside those walls -- to parents, the local community, to other civic and social agencies and forces and to the community at large.

It is becoming increasingly clear that the traditional ways of operating a "school" are no longer functioning adequately. We are already in Boston extending the school day with after school programs, extending the school year with summer programs, extending the range of legitimate educational interest with additional health and social service programs such as Headstart, and more pupil adjustment and psychiatric counseling.

But these things are only the beginning of changes to come. The twelve month school year is just around the corner (with optional vacation periods). We are heading quite rapidly towards a twelve or fourteen hour day in which schools are open for voluntary programs (especially art, music, dance, science, drama), for both children and adults. The schools, too, will become more and more "community" schools -- more attached and responsive to the local community (even though many of the students in the local school will come from other communities and vice versa). The "school" will also become not only a community center but will begin to serve or at least house cooperatively other civic functions -- health and day care services, welfare if needed, housing and urban renewal offices, job centers. It is even possible that a system of local community committees with considerable influence might be set up to help run the schools and coordinate all of the various community agencies.

We do not know exactly what direction history is taking us here or just what the new shape of the "school" institution will be. But we had better be thinking about all of these matters.

II.

Objectives

From all of the myriad aims that an educational system could and probably does have, we would select six as the ones we feel have paramount importance at this point in time (subject, as always, to total revision):

I. We feel the single, most important thing we could do for all children is to make it possible for them to discover the intrinsic satisfaction and delight that can come from the successful employment of their own intellectual and aesthetic energies at whatever level those energies are or can become capable of operating.

II. If we can succeed in proving to children that such intrinsic delight exists and that they can experience it, then we would like to have those children become increasingly self-motivated and increasingly responsible for their own learning and education.

If, given a chance to display such responsibility, they do show it, then we would like to give them an increasing freedom of choice (within broad limits) to determine what they are going to become most deeply involved in. We would like to make their education as self-directed as possible. We do not know at the moment what the minimum and maximum limits to that range of choice and self-direction will be. The range will also, obviously, vary with individual children. But it is clear to us that none of the children are going to become intellectually responsible adults unless they have considerable experience in behaving responsibly as students and being free to exercise some control over their own behaviour.

III. As an extension of the above aims, we would very much like to have children emerge from our schools convinced that they are, to some large extent, able to cope with the world, that they possess the necessary intellectual and aesthetic skills and are therefore competent to manage themselves and their lives in such a fashion that they might have some positive effect on that world if they so choose.

IV. Although the list of "necessary intellectual and aesthetic skills" could probably be endless, we believe strongly that the following mental skills (perhaps operational competencies is more apt) should rank high, perhaps even highest, in priority among those we assist or guide children to acquire. These are the "skills" along with and including reading, writing, and figuring mentioned in assumption No. 2 above. Some of them (tentatively and with basic credit to J. S. Bruner, Piaget and others) are:

A. *Observations*:

We would like to sharpen the capacity of children simply to see, hear, touch. smell, and taste, to be open to and aware of themselves and the world about them. We want them to be aware of small things -- bugs, blades of grass, tiny animals -- as well as large things -- clouds, cities, oceans and elephants. We would like them to be able to *feel* all these things and be more aware of their own feelings about them.

B. *Comparison*:

We want children to be able to *compare* *and* *differentiate* between all of the various sights, sounds, tastes, smells and touches, to separate them out and distinguish between them with some accuracy, to begin to see differences and similarities.

C. *Classification and Categorization*:

We would like children to be able to take the evidence, information and feelings they gather and to *organize* them into some order so that they can be in the first instance simply thought about and manipulated. In short, we want children to be able to perform the fundamental act that George Gaylord Simpson has called "the perceptual reduction of chaos." We would also like to have them begin to discover that all human systems of classification are arbitrary and exclusive rather than God-given and all-inclusive.

D. The Perception of Problems:

While this may not fit as a strict "operational competency," we would like to help children begin to sense the problems that inevitably arise from any attempt to impose order on what we see all around us -- the inconsistencies, gaps and inadequacies in all ordering systems. We would like children to become disturbed and bothered by and acutely aware of the flimsiness of most theories and explanations offered by the adult world and its books, lectures, films, etc. We would like them to be suspicious of pat and glib answers, to have their curiosity engaged by what the better answers might be. We would like them, in short, to become intrigued by the whole process of being dissatisfied with existing explanations or beliefs; of sensing that dissatisfaction as presenting a "problem" that they might wish to explore and wrestle with; and of feeling impelled by their own doubt and curiosity to delve into the matter and attempt to come up with a more adequate solution or answer, no matter how tentative.

E. Intuition and Hunching:

After the children have sensed that a problem exists and is perhaps worth pursuing, we would like them to be able to play with possibilities, to begin to be able to accumulate relevant information and to manipulate it in a relatively free, unrestricted, perhaps quite left-handed way. We would like them to be able to take intuitive leaps, to play their hunches, to bring all of their imaginative faculties to bear, to go beyond the information given, even if for the moment they may not be able to support the leap or the hunch with all of the relevant data. Eventually we would like them to be able to see and understand that the act of thinking and learning, the act of using their minds is not by any means the cold application of icy logic or a dogged and routine use of some mysterious formula called the "scientific method." We would like them to see that nothing of value -- no scientific theory or symphony, play or work of art -- was ever created by simply following some bleak set of methodological rules. As they discover this, we would like them at the same time to experience the pleasures of employing their own imaginative faculties -- the passions of their own hearts and hands -- in the pursuit of answers to their own nagging questions and problems.

F. Hypothesis Building and Testing:

We would like to have children realize, too, that while intuitive speculation is vital, it is only the beginning of the process, that the hunch or leap becomes important or useful only when it has been turned into an hypothesis that can be persuasively supported either by a re-organization of existing facts or by new facts gathered in the process of building the hypothesis -- or both. (The analogous situation in the arts would be that the initial creative impulse is useless or wasted until it is subjected to the rigorous discipline of being wrestled down on paper as a story, novel, or poem, or written down and performed as a play, or written down and performed as a piece of music, or transformed through the medium of paint into a picture, etc.) We would also, therefore, hope to get children involved in the process of putting their hypothesis (and creative impulses) to the test (or going through the pleasurable agonies of producing their creative works). By this we mean exposing them to the test of experiment (in the natural sciences), to the test of either experiment or the exposure to more and wider data (in the social sciences) or exposed to production and critical opinion (in the arts and humanities). This also clearly implies exposure to the cut and thrust of debate, to argument and controversy with one's fellow students and teachers, for it is in heat of this debate and controversy that much of the light and pleasure is generated.

G. Extrapolation:

In the process of building and testing their ideas, the children will in all probability discover that none of their beautiful theories quite takes care of all of the evidence or covers all of the holes. In the case of gaps in the theories or those vast areas where adequate information is simply not available, we would like to see the children involved in the process of speculative extrapolation, or going beyond the information given in the sense of filling the gaps with a controlled imagination and a respect for what is known. For instance, if little is known about the market economy of pre-Sumerian urban complexes in Mesopotania, then it might be fun for students to see if they could build an in-put -- out-put model of how it might have worked.

H. Interpretation:

After hypotheses have been constructed and tested, extrapolations made and theories derived, there still remains the never-ending problem of what it all means. This generally appears to be a communal activity. Although everyone always performs his own interpretive acts, especially where his own data is concerned, no one has a sufficiently broad grasp of all the information and ideas in a field to go it completely alone. Much of the pleasure and enlightenment of learning comes out of the exchange of ideas and information, out of disagreements and the process of forcing oneself to figure out what one's ideas and hypotheses really mean and how they contribute to a clarification -- or perhaps a sudden obscuring -- of the problem and the general field.

I. The Building of Models:

We would also like to engage the children in the practice of constructing intellectual models -- models, for instance, of the world-view of existing cultures or of ancient civilizations, or of natural phenomena, such as the atom.

J. Appreciation:

Since we hardly expect that all of our children will turn out to be original creators in scholarly pursuits or the sciences or in drama, music, literature and art, we would like them to become very much aware of the pleasures and satisfactions that can be derived from less than skilled participation in or simple appreciation of the world of thinking and of the arts. By this we mean very clearly not just what are normally thought of as the "higher" expressions of these pursuits, not just George Eliot, Mahler, Ibsen, Einstein, etc., but the broader and more popular aspects as well. It is difficult and somewhat arrogant for us to be that certain that Bach is somehow ultimately superior to jazz (remember what Hanslick said about Brahms) or folk-rock. What is important here is that young people be open to and curious about all of these things as valuable expressions of the human species. It is equally important that the schools not always find themselves the representatives and purveyors of the dead hand of the past, insensitive to and scornful of those things which evoke an immediate and highly relevant response in the young people themselves. After all, they are the future, and we are not.

V. We would like to make the job of teaching more productive and professional by doing the following things:

--By adding personnel to the schools and to the classroom, personnel of great variety and differing talents. These would include parents and community people, college and high school students (for the elementary and middle schools), student teachers and volunteers. Some of these people might be doing essentially assistant teaching, others arriving on special occasions for special kinds of instruction (music, art, drama, or as resource people in special topics), still others as aides assisting in routine chores.

--By transferring as much of the instructional and "motivational" responsibilities as possible from the teacher to the total classroom (or academic space) environment and to the greatly enhanced (both quantitatively and qualitatively) materials with which the rooms should be filled. This kind of environment will be highly structured in the sense that the school and the teachers will have complete control over what kinds of materials go into the room and therefore complete control over what is studied and how. But within the overall structure, we would like the materials to be such that they can generate the intrinsic interest of the children and thus relieve the teacher of much of the need to "motivate" children. In addition, we would hope that many of the materials can be self-instructional, that they can be used by students with a minimum amount of guidance from the teachers. Within this kind of a framework, we would hope that the students would be able to have a wide variety of choice about what, at any given moment, they might decide to get involved in. If the teacher has adequate assistance and adequate amounts of high-quality, self-instructional materials, perhaps she will have a great deal more time to spend helping individual students who need her attention while other students can progress at their own speed and largely on their own.

VI. We would, finally, like to make schools into instruments that better reflect and better serve their community. This may mean in the first instance much greater communication between school and community, more powerful and broadly representative parent and community groups, afternoon and evening programs designed by and for the community. But it may also (as under current Title III projects) mean new schools and school-centered complexes devoted to many things other than formal schooling -- welfare and psychological services, day care, libraries, employment centers, adult education, etc. These complexes, again, must be designed with and for the community. But even beyond these things, there may well be modes of education that can be best accomplished outside of "school" -- within community organizations or business and industry. If so, we would like to encourage their growth and build linkages with the more formal school programs. Education might thus become the result of the total involvement of everyone and thus become as effective as it might and should be.

III.

HYPOTHESES

(not intended to be an exhaustive list, and no operational definitions provided at this time)

A. CONCERNING CHILDREN

1) The intelligence of children (or adults) is not genetically fixed.

Without getting too deeply involved in the nature-nurture argument and using "intelligence" here to mean the active and effective employment of one's intellectual and aesthetic energies, we would guess that society (culture) and the instructional process society imposes upon a child have a great deal to do with the level at which that child becomes capable of employing his "intelligence." We would suggest the further possibility that the traditional instructional process as created and used by Western European and American culture has in general done as much to inhibit the growth of intelligence in children as it has to enhance it. We would also like to begin conceiving of intelligence not as something one scores on a paper and pencil test but as something one does.

2) Children's minds operate in ways that are qualitatively different from (but not by that token inferior to) the minds of adults.

Although this is a question for psychologists and not educators to answer, we suspect that children, especially young children, simply do not operate by the same cognitive rules that adults imagine apply to adults. Children are not merely inept adults but have ways of looking at the world and handling information that at least appear to be quite different from adult ways. As these ways of thinking get shaped by society and its schools, they change and begin more to approximate adult ways. Perhaps much of value is lost in this process. At any rate, if we knew more about what these qualitative differences might be, we would perhaps be able to devise a more effective and certainly more courteous instructional process.

3) The development of a child's intellectual and aesthetic energies appears to be a logical and coherent if still mysterious process.

Again a problem primarily for psychologists rather than educators, but if Piaget, Bruner, Vigotsky et al, are correct, then we would like very much to become clearer on just what the process is, how the mechanisms involved operate, and how these operations might best be used to create an instructional process that is more congruent with children's development and will therefore be more effective.

4) All normal children are curious.

Inquisitiveness is a basic human trait, at least as present in children as in adults. Although it would be difficult to find an uninquisitive pre-school or out-of-school child, it is not at all difficult to find one in school. This should give us pause and much food for thought. Perhaps many of our current practices -- scheduling, adults always deciding what children should be doing, schools organized for the convenience of teachers and administrators rather than children -- perhaps these practices are cutting us off from the enormous energies within the children themselves. It should be possible for us, with all of our wisdom and ingenuity, to devise ways of maintaining and using the curiosity of children rather than viewing it as something that must always be curbed, regulated and channeled.

5) Children tend to "learn" at different speeds and in individual ways and by means of different learning "styles".

By this we mean simply that all children may not "learn best or most effectively through solely verbal means or primarily through books. Some children may need a great deal more manipulation of concrete materials, others may rely heavily on visual images. All children undoubtedly have all styles or modes at their disposal, but the balance between them appears to vary. It is obviously important in a society such as this to assist all children to attain a high degree of proficiency in verbal and symbolic skills, but this should not lead us to ignore less verbal avenues to knowledge, nor should we assume that everyone can or must learn the same thing at the same time or by the same age.

6) There are (may well be) "learning" differences among children that very in level according to social class and in pattern according to ethnic group.

Recent research (Lesser) tends to indicate that different ethnic groups emerge from a series of mental ability tests with different patterns of ability and achievement. These patterns tend to remain constant for such ethnic groups but levels of achievement within these patterns will vary by social class (higher class groups generally do better than lower class groups). If this is so, it raises the spectre of the necessity to tailor the instructional process not only according to individual differences but according to social class and ethnic differences as well.

B. CONCERNING THE INSTRUCTIONAL PROCESS

(Instructional process here defined as assisted learning within a situation designed for that purpose.)

1) The instructional process can have a significant impact on the lives of children independent of social class and ethnic group.

Recent research (Coleman) tends to suggest that schools as they are currently operated have little impact on children beyond the passing on of a certain amount of rudimentary knowledge and the skills of reading, writing and figuring. In general, those schools housing children of high social and economic status and white or oriental ethnic background will produce children who score well on standardized intelligence and achievement tests. Schools housing children with lower socio-economic status and non-white or non-oriental ethnic background produce children who score poorly. We can, as a start, assume that there is a suspiciously high correlation between schools containing largely middle class whites and intelligence and achievement tests largely standardized with white middle class children, tests in addition that are designed to test what is taught in a typical white middle educational system. But what Coleman's research seems to imply is that the instructional process as currently practiced is quite at the mercy of social class and ethnic origin -- there is little it can do to overcome, let's say, the possibly deleterious effectsof a child's being born poor and Negro. Nor, apparently, is there much school can do to destroy a middle-class white child's ability to do well on tests. We are not willing to accept (nor is Coleman) this conclusion. We tend to believe that a radically different instructional process (and therefore radically different schools) along with tests that measure a much broader range of skills, attitudes and achievements can at least begin to make a substantial impact on the lives of children, whether the children be white or Negro, poor or rich.

2) The instructional process will make a substantial impact on children only if, by design or accident, it is able to be congruent with the abilities and interests of children at each stage of their development, if it is "courteous" towards what is going on inside the heads of children, takes this into account and makes use of it.

This means only that what children are asked or expected to do in school must, in some way, be in tune with children -- with whatever their individual abilities and interests may be, with what is bothering or delighting them, with what seems relevant to them. If strict attention is not paid to this, as is too often the case, then children will simply turn school off as trivial, boring and a waste of time. "Motivating" them will suddenly become a major problem where no problem need basically exist. This does not mean that therefore the curriculum should be invented by children as they go along. Adults (teachers, administrators, parents) have to make some basic decisions -- it is better to study science through balance beams, live animals, mystery powders, etc.) then to study how to steal bicycles. Indeed, adults in some form are going to determine what the basic environment of school and classroom is going to be, what essentially is going to be there to be used and what is not going to be there and not be used. What we are suggesting here is an instructional process in which both children and teachers are not so constrained that if children do become grabbed by a topic or a gadget or an animal they are allowed to pursue that engagement and are not cut off by some (to them) arbitrary and irrelevant external demand that "it is now time to. . . . ." We would guess that this kind of process would be more effective if only because it might have a chance of turning children on about learning, of convincing them that school is worth while.

3) Children will "learn" better if the environment in which they are asked to operate if "responsive", if it includes both structure and freedom, if it is full of intriguing material that asks questions, and if it provides ways of finding answers to those questions.

"Learn" here means to become involved in the process of enploying their intellectual and aesthetic energies upon productive (as defined largely but not solely by the school) tasks. A "responsive environment" (with apologies to O.K. Moore) then would essentially be one that a child can manipulate and do things to and which, when the child does this, answers the child back. This means it must be filled with things -- books, films, kits, animals, games, easels, paints, clay and adults -- which are not only intrinsically interesting but which are structured in such a way that with a minimum of assistance a child can get answers to the questions that arise in his mind. As children grow older (high school), they may not need such a profusion of materials but may rather need more ability to get out of the school altogether and investigate the outside world and its operations (a different kind of responsive environment).

4) Children will learn better if, as much as possible, they are allowed to find answers to questions.

"Discovery" can easily be carried to ridiculous extremes, and certainly there are many times when straight factual information is best simply given. But, in general, minds are not stirred by the pre-digested conclusions contained in textbooks and other people's formulae. The problem is how to get children involved in the whole process of sensing problems, finding data, etc., and building answers, and the heart of this problem then lies in the development of materials that make this possible.

5) Children will learn better if teachers, while being responsible for structuring the environment, act within that structure more as guides and assistants to the learners rather than instructors in the traditional sense.

This suggests that teachers should not act as the fountain of all knowledge and right answers but as people who are there primarily to assist children in getting involved in a process that may end up being largely self-instructional.

6) Children will learn better if they are not kept in a state of constant anxiety and worry caused by the fear of constant judgement by adults and "school".

Constant tests, grades, assessments, etc., can easily lead to the destruction of the very qualities of involvement and intrinsic delight that should be the primary rewards of learning. These practices of never-ending tests also lead teachers into the trap of teaching to achieve high scores on tests. A little tension may be a Good Thing, but repeated failure to succeed in passing tests can also lead children to conceive of themselves as stupid when they are only bad test-takers and as intelligent when they are only good test-takers.

7) Children will learn better if they have a chance to assist other children to learn.

One never learns anything quite so thoroughly as when one has to help someone else learn it -- (back to the Lancastrian School).

8) The errors children make are one of the best sources of information we have as to what is going on inside the child's mind.

Errors, far from being treated as crimes and punished, should be looked upon as opportunities to discover the state of a child's mental operations, what he is really thinking. A correct operation or a "right" answer can be arrived at for quite wrong reasons. An error is probably always made for the wrong reasons and usually indicates that some kind of inadequate or innefficient processing is going on inside the child's head. As every good teacher knows (if only he or she had the time), this is not the moment to give the child a bad mark and write him off as stupid but the cue for action, the moment for an adult to move in and begin to help the child work his way through the problem until the source of the error can be discovered and corrected, preferably by the child himself.

C. CONCERNING SCHOOLS

1) School can be a pleasurable and satisfying experience not only for children but for teachers and parents as well.

Although an equally good hypothesis might be that there are inevitable tensions between teacher and pupil, teacher and parent, school and parent, school and community, we would hold that these tensions are to a large extent artifacts of the way schools have traditionally been organized, operated and staffed. This does not mean that a tensionless, perfectly smooth and therefore perfectly dull situation can be created in this best and worst of all possible worlds. What it does mean is that it is possible to create an institution in which these potentially antagonistic forces can be so shaped that they are essentially heading in the same general direction, a situation in which each force is contributing to and receiving support from the others.

2) Children will respond more positively towards school and the instructional process and will "learn" better if school is not rigidly organized by grades, if teachers are guides rather than purveyors of knowledge and punitive judges, if each child is not fed into a blind machine but a process tailored to his specific talents and liabilities.

This is an argument for an un-graded school with an extremely flexible curriculum and that quite different (and much harder and more important) role for the teacher. It also argues for a much larger ratio of adults to children with not all of the adults being conventional teachers. Additional personnel might include subject area specialists, assistant teachers, neighborhood aides, special teachers for the arts, community instructors for after-school and evening programs, school volunteers, pupil personnel service people, community liaison workers, teacher interns, etc. Only by radically reducing the child-adult ratio can a school begin to provide the individual attention required for a flexible curriculum, even though much of the learning may be done by students working on their own.

3) Under the kind of program described above, "discipline" and "control" problems will tend to disappear or be minimized.

Many of the problems usually listed under the general rubric of "control" may in fact be created by an instructional process which appears to children to be dull, insipid, trivial and boring and by "schools" which too often give the appearance of and act like prisons. Bored, uninspired children will, of course, act up and seek vengeance upon the innocent (in many cases) teacher. Control is always a problem in highly regimented institutions such as the armed forces and schools. If, on the other hand, children have a wide variety of interesting and engaging things to do, if they are not ordered about according to strict and arbitrary (to them) schedules, if teachers are not continually cast in the role of punitive judge, then perhaps children will lose some of their strong motivations toward rebellion.

4) Teachers will lead more satisfying and more professional lives if they are not confined to prescribed patterns of content and method, if they are free to develop their individual styles and competencies, and if they are supplied with adequate amounts of assistance so that they are relieved of petty details and annoyances.

It could be added that if teaching becomes this kind of profession, it will perhaps attract an even higher calibre of person than it does now.

5) Parents and the Community will be happier with the institution called school if they become convinced that the school in some very real sense belongs to them, if it serves not only the purpose of schooling children but also acts as a major community resource and service center, and if they feel that as the community they can have some real impact on what happens in that school.

It must be clear to everyone that in this day and age schools and school systems can no longer operate as empires apart from the world around them. A school can no longer be that grim institution down the street that children long to escape from and adults learn to ignore as largely irrelevant. This requires some re-thinking of the way schools operate -- perhaps even some changes in the laws by which school systems are constituted. Whatever the eventual result of this re-thinking, it seems clear that schools will have to be a great deal more responsive to the particular communities in which they find themselves -- responsive not only in terms of providing a greater variety of services and more of them but in giving parents and the local community a greater share in the responsibility of operating the school and its programs. For now, this must be an advisory role, but there are other models of schools and school-community relations that should be tried also.

6) The physical facility within which a school program operates has significant effects -- both positive and negative -- on the effectiveness of that program.

All practicing educational people are aware of how destructively an inadequate and inflexible facility can operate to restrict an instructional program. What we are not so often aware of is the enormous positive benefits an appropriate and adequately flexible facility could bring to an educational operation. We tend to be far too resigned to bestial conditions for children, teachers and the community. We have only begun to use our imagination to design the educational environments we need.

D. CONCERNING DISADVANTAGED, ESPECIALLY NEGRO, CHILDREN

1) No child is genetically inferior simply because he is born to poor parents or is born both poor and Negro.

2) However, being born poor and especially being born both poor and black constitutes -- in this society -- being born "disadvantaged" to some degree if typical white middle class advantages are used as the standard of comparison.

This may well be a dubious proposition in that typical white middle class standards may themselves be dubious standards of measurement. It could just as easily be argued that white middle class suburban children are "disadvantaged" because they live in homogenized, white, and excessively comfortable ghettos and are thus deprived of the knowledge of what the larger world and life are all about.

3) Poor children, and especially poor Negro children, may have linguistic and cognitive deficiencies -- again if the standard of comparison is typical white middle class patterns of linguistic and cognitive behavior.

By all available evidence, poor children and especially poor Negro children do not score well on standard achievement tests as middle class whites. Whether this difference is due to the way the tests themselves are constructed and standardized or to differences in the cultural patterns of poor and middle class children or a combination of both remains to be unraveled by social scientists. However, it is interesting to note that, if Coleman is correct, poor children (even Negro children) do not receive an "inferior" education in American schools, by the somewhat narrow standards used in that study. They are no more discriminated against than middle class white children in terms of facilities, money spent, materials, special programs, etc. Assuming for a moment that these linguistic and cognitive differences do exist (and putting aside the problem of tests), several possible alternatives arise, to wit:

4) Poor, and especially Negro, children have different but possibly quite valuable linguistic and cognitive patterns that are well worth in some fashion preserving.

It is possible that these children view the world, people and human institutions in ways that are much closer to "reality" than do middle class white. Children who have experienced violence, poverty, broken homes, inadequate housing, hunger etc., are not liable to be easily convinced by glib answers and pat solutions to social -- and perhaps intellectual -- problems. They are perhaps tougher, less sentimental, less amenable to cant and hypocrisy, less easily fooled, perhaps even more honest with themselves and others. Their language, too, while it may have certain deficiencies, may also be in some ways much more colorful and poetic as well as considerably more lurid than white middle-class language. Perhaps much of this should not be stamped out by school but rather used and essentially shaped up so that it becomes not less but more powerful and expressive.

5) The culture of poverty, especially Negro poverty, may contain within it forces that make it difficult for poor children to accept the typical American school and its educational practices.

Since the American educational system has traditionally been a system for whites (although by no means only for rich whites, since it has been the primary means by which the country has assimilated waves of poor immigrants), it is possible that most schools and school programs are not adequately designed to deal with the children of contemporary poverty.

6) Poor, especially Negro, children need a radically different and much more powerful educational process than do white, middle class children.

It is possible that poor, especially Negro, children need to start school at a younger age, that they need an even broader and richer educational experience including many more services ranging from health, psychological counseling, afternoon and evening programs, day care services, etc. We would hesitate to say at this point that these children need an instructional process different from or better than the one outlined above, at least until that one has been tried and proved insufficient. It may have to be slightly different for Negro children -- providing more special material on Negro history (although why this would not also apply to white children we are not quite sure).

7) The central problem for poor, especially Negro, children is not "self-image" as conventionally thought but rather the problem of believing that they can cope with the world and have an effect upon it.

This, which appears to us to be one of the most interesting of Coleman's findings, is a real surprise. It would indicate that, in so far as school can have an effect independent of class and ethnic origin, one of the main things an instructional process could and should do for these children is to give them a taste of success, a chance really to exercise their intellectual and aesthetic powers and to prove to themselves that as individuals they can exert a considerable influence on the course of their own lives and upon the condition of the world around them.

E. CONCERNING SCHOOLS FOR DISADVANTAGED CHILDREN

1) "School" -- assuming a markedly more effective instructional process -- can be of more assistance to disadvantaged children

then to white middle class children.

This is a tricky one, but it is based upon Coleman's belief that existing school programs do not assist disadvantaged children in overcoming the effects of their social and ethnic origins. Since, in this society, white middle class children presumably do not need to overcome the effects of their social and ethnic origins, the hypothesis has to be that a radically more effective educational process is not only needed for disadvantaged children but -- if successful -- will actually help them overcome such effects and will therefore be of greater assistance. (Actually, we do not accept the notion that white middle class children do not also need to overcome the effects of their social and ethnic origins -- but let that pass for the moment). If we accept Coleman's interpretation that the present educational system is not capable of closing the gap between the longitudinal performance of disadvantaged and non-disadvantaged children but actually causes the gap to increase, then clearly something quite different is needed for disadvantaged children. We propose that the instructional process suggested above, plus afternoon and evening programs plus close relationships with the parents and the community, will be a start towards an educational system that can close that gap -- and perhaps even begin to create a gap in the other direction.

2) The creation of such a radically more effective educational process for disadvantaged children may require special materials and special approaches.

If it is true that the basic problem for disadvantaged children is convincing them that they can have an effect on their world, then we may have to introduce some peculiar and spectacular experiences into the "curriculum". We do not mean here simply introducing Negro history into predominantly Negro classes (if the recent experience of some curriculum revision group can be relied upon white suburban children need this more than Negro children). It may be necessary, for instance, for disadvantaged children to get out of the classroom with great frequency and do things in the great world out there -- actually see what is going on, make their presence felt, observe and work with models of success and competence and prove to themselves that they can do it too.

3) Integration -- not just racial but social integration as well -- may be one of the most powerful ways of improving education for both advantaged and disadvantaged children.

One of the most fascinating of Coleman's results is the indication that both lower class white and Negro children appear to benefit from attendance at either white or Negro middle class schools. In other words, the factor that was most significant was not race but social class -- lower class white children would presumably benefit more from attending a predominantly Negro but middle class school than would lower class Negroes if they attended an all-white but still lower class school. One problem being that there are so few middle class Negro children, especially since 40 per cent of them are sent by their parents to private schools.

Apparently middle class children are not injured by going to school with lower class children. What all this may imply for the education of disadvantaged is not too clear, except to suggest that the best kind of school for all children -- but especially for the disadvantaged -- would be a school that was a careful mixture of all classes and all ethnic groups -- if one could be quite certain that there would be no ability grouping or tracking that might result in ethnic or class (or both) segregation within the school.

4) It may be necessary in the long run -- before the educational problems of disadvantaged (and advantaged) children can be worked out -- to re-think the entire idea of what a "school" is and what "education" should be.

We suggest this long range possibility because we are not at all sure that "schools" as they are presently institutionalized in this society are or can be adequate to the enormous task that is being thrust upon them. It is not easy to be all things to every man and his first cousin.

But it is clear to us that school systems must begin to pay close attention to all of these problems. And if it wishes to "pay attention", a school system must develop within itself the capability for doing it. This means a staff of people equipped by experience and desire to think creatively and with freshness, a group equipped with freedom, funds and facilities to do honest and continuous research and development and provided with ways of moving developed ideas into the school system at large. Unless such a capability exists as a permanent part of the system, the schools will always be in danger of falling behind, of not being able to take advantage of or making a contribution to the creation of new and better ways of educating children.

B-4: The Announcement to the Teachers at the End of January Requesting that they Begin to Make Efforts to Implement the Innovation, and a "Suggested Daily Program Schedule"

As discussed at our last teacher's meeting, we are now planning to direct our energies toward implementing the philosophy of the innovation. (Refer to Preliminary Draft " Some Reasons and Suggested Ways of Organizing the Classroom)

We shall institute the following reorganization:

1. We shall no longer attempt at departmentalization or specialization. Every teacher will come familiar with all aspects of the activities and experiences planned for the whole classroom.

2. Teachers will want to work in all subject areas. Wherever possible two teachers will work in the same room - giving individual attention to the students. Planning should permit:

    1) Where possible - a variety of activities from which children may elect.
    2) A free but safe and industrious attitude magnifested by high activity.
    3) Self-learning
    4) An emphasis on self-discovery and the process goals. (Tool Skills are not to be neglected)
    5) Teachers will guide children by suggestions
    6) Purposeful behavior - our aim- self discipline.
    7) Creative modes of individual learning through*

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*The page ended with this incomplete sentence.

Suggested Daily Program

8:30 - 8:45	Student Arrival
8:45 - 9:00	Daily Announcements
9:00 - 9:15	A.M. Orientation
9:15 - 10:30	A.M. Activities - Emphasis on Language and Arithmetic Tool Skills
10:30 - 10:50	Recess
10:50 - 12:00 Noon	Pre-noon Activities
10:50 - 11:00	Orientation
11:00 - 11:30	Activity Period - Emphasis on Science and Social Studies
11:30 - 12:00 Noon	Alternate a Practice Teacher Written skills Teacher (2nd) at lunch
12:00 - 12:30	(Suggested Game Learning) Teacher (2nd) at lunch
12:30 - 1:20	Reading Phases
1:20 - 1:30	Orientation for P.M. Activities
1:30 - 2:20	P.M. Activities
2:20	Dismissal

1. Practice teachers will be here only until noon each day.
2. Teacher need attempt only those directions leading toward the innovation as he or she desires and can handle with confidence.
3. Watch control - Plan for purposeful behavior. If at anytime- activities are not purposeful learning experiences revert to traditional class situation so that you can rethink your plan and discuss you organization with the subject specialists or at a staff meeting.

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